

59	SKP2"	Fp11	Fp12	Fp13	Fp14	Fp15	Fp16	Fp17"	Fp18*	Fp19	Fp20	Fp21*	Fp22	Fp23"	Fp24"	Fp25
10	Q E S U L G M F S C	Q D H D H E A N N L S Y	Q D L E L S F Y L K W	Q O H F E L Q O M F Q	Q H H V Y L Q Y L S E	Q N H L K F T L F T H	Q E V Y L E Y Y S Y	Q W A G E K G Y S N G A L	Q P E V Y E P L E G R V I S A	Q H S M Y Q O F F G L	Q L H U Y Q O F F G L	Q P E V Y E P L E G R V I S A	Q K E E Y L E Y Y S Y	Q M E V Y E P L E G R V I S A	Q Y E E Y E P L E G R V I S A	Q P E V Y E P L E G R V I S A
20	Q C L P E	Q D P A T	Q D P L L Q D D	Q D P L L Q D D	Q D P L L Q D D	Q D P L L Q D D	Q D P L L Q D D	Q D P L L Q D D	Q D P L L Q D D	Q D P L L Q D D	Q D P L L Q D D	Q D P L L Q D D	Q D P L L Q D D	Q D P L L Q D D	Q D P L L Q D D	
30	Q S C L A S	Q S C L A S	Q S C L A S	Q S C L A S	Q S C L A S	Q S C L A S	Q S C L A S	Q S C L A S	Q S C L A S	Q S C L A S	Q S C L A S	Q S C L A S	Q S C L A S	Q S C L A S	Q S C L A S	
40	Q S L K V S I G V C K R E Q N K Q N Q N E V F H	Q S L K V S I G V C K R E Q N K Q N Q N E V F H	Q S L K V S I G V C K R E Q N K Q N Q N E V F H	Q S L K V S I G V C K R E Q N K Q N Q N E V F H	Q S L K V S I G V C K R E Q N K Q N Q N E V F H	Q S L K V S I G V C K R E Q N K Q N Q N E V F H	Q S L K V S I G V C K R E Q N K Q N Q N E V F H	Q S L K V S I G V C K R E Q N K Q N Q N E V F H	Q S L K V S I G V C K R E Q N K Q N Q N E V F H	Q S L K V S I G V C K R E Q N K Q N Q N E V F H	Q S L K V S I G V C K R E Q N K Q N Q N E V F H	Q S L K V S I G V C K R E Q N K Q N Q N E V F H	Q S L K V S I G V C K R E Q N K Q N Q N E V F H	Q S L K V S I G V C K R E Q N K Q N Q N E V F H	Q S L K V S I G V C K R E Q N K Q N Q N E V F H	
50	Q D Q M A F Q	Q A C T E V W Q	Q I M P D C W R	Q I S D C W R	Q N P I C W R	Q D P L F W R	Q D P L F W R	Q D P L F W R	Q D P L F W R	Q D P L F W R	Q D P L F W R	Q D P L F W R	Q D P L F W R	Q D P L F W R	Q D P L F W R	
60	Q D E S L W K	Q D G M A F Q	Q A C T E V W Q	Q I M P D C W R	Q I S D C W R	Q N P I C W R	Q D P L F W R	Q D P L F W R	Q D P L F W R	Q D P L F W R	Q D P L F W R	Q D P L F W R	Q D P L F W R	Q D P L F W R	Q D P L F W R	

FIG. 1

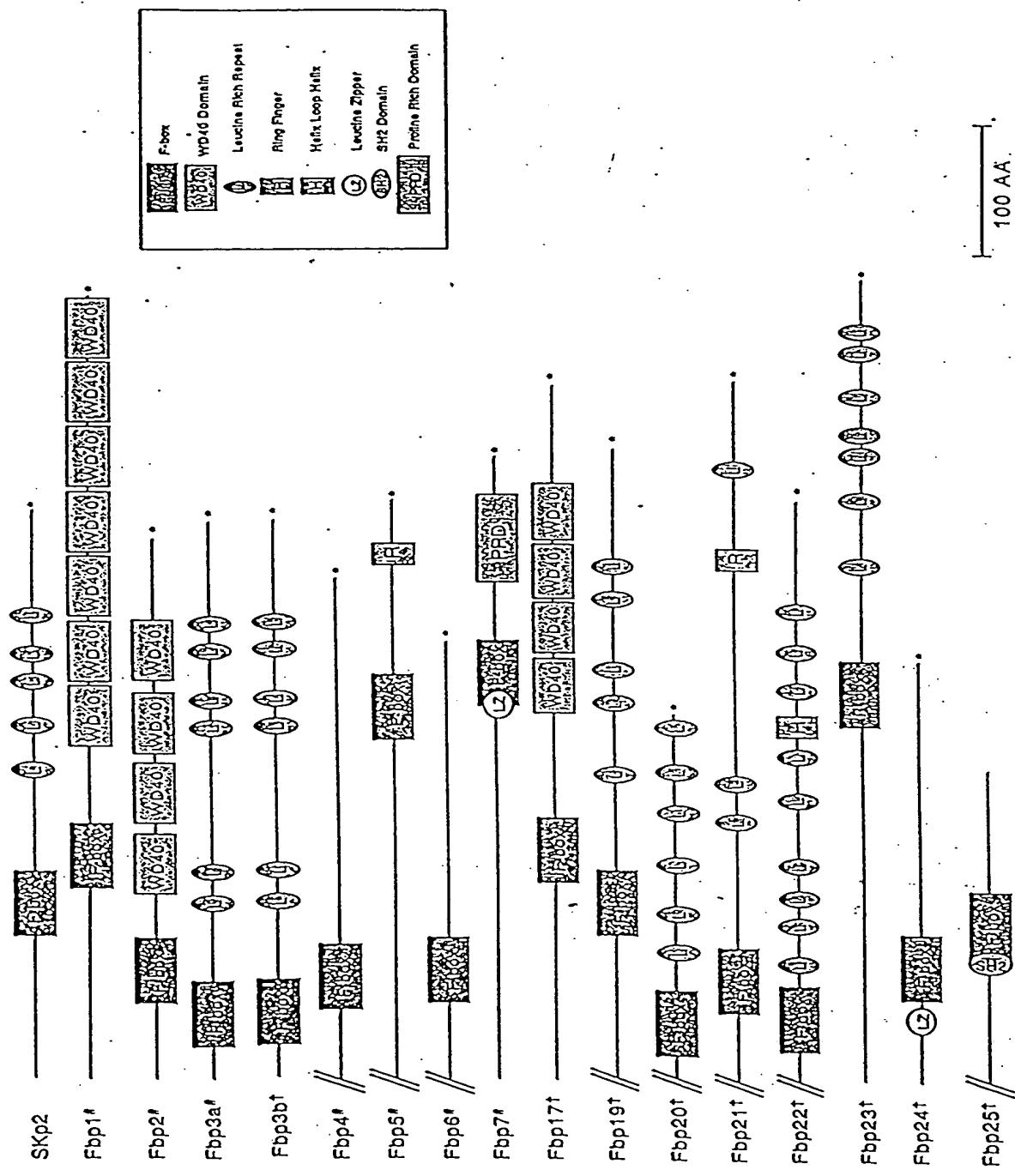


FIG. 2

10	20	30	40	50	60
MDPAEAVLQEAKFMNSSEREDCNNGEPPRKIIPEKNSLRQTYNSCARLCLNQETVCLA					
70	80	90	100	110	120
STAMKTENCVAKTKLANGTSSMIVPKQRKLSASYEKEKELCVKYFEQWSESVDQVEFVEHL					
130	140	150	160	170	180
ISQMCHYQHGHINSYLPMLQRDFITALPARGLDHIAENILSYLDAKSLCAAELVCKEWY					
190	200	210	220	230	240
RVTSDGMLWKKLIERMVRTDSLWRGLAERRGWGQYLFKNKPPDGNAPPNSFYRALYPKII					
250	260	270	280	290	300
QDIETIESNWRCGRHSLQRIHCRSETSKGVYCLQYDDQKIVSGLRDNTIKIWDKNTLECK					
310	320	330	340	350	360
RILTGHTGSVLCLQYDERVIITGSSDSTVRVWDVNTGEMLNLTIIHCEAVLHLRFNNGMM					
370	380	390	400	410	420
VTC SKDRSIAVWDMASPTDITLRRVLVGHRAAVNVVDFDDKYIVSASGDRTIKVWNTSTC					
430	440	450	460	470	480
EFVRTLNGHKRGIACLQYRDRLVVSGSSDNTIRLWDIECGACLRVLEGHEELVRCIRFDN					
490	500	510	520	530	540
KRI VSGAYDGKIKVWDLVAALDPRAPAGTLCLRTLVEHSGRVFRLQFDEFQIVVSSHDDT					
550	560				
ILIWDFLNDPAAQAEPPRSPSRTYTYISR					

FIG. 3A

10 20 30 40 50 60 70 80 90
 TGGCTGGCTGGGCTGGCACCAAGGGGGGGGGGGGGAGGGGACCCAGTGGCTGGGCTGGGCTATGGACCCGGAGGGCTGC
 100 110 120 130 140 150 160 170 180
 AACAGAAGGCACTCAAGTTATGAATTCTCAGAGAGAAGACTGTAATAATGCCAACCCCTAGGARGATAATACCAAGAGAACATTCACT
 190 200 210 220 230 240 250 260 270 280
 TAGACAGACATACAACAGCTGTGCCAGACTCTGCTAAACCAAGAAACAGTATGTTAGCAAGCACTGCTATGAAGACTGAGAACATTGTGTGCC
 290 300 310 320 330 340 350 360 370
 AAAACAAAATGCCAATGCCACTTCCAGTATGATGTGCCAACGAACTCTCAGCAAGCTATGAAAAGAAAAGGAAAGAACATGTGTGCC
 380 390 400 410 420 430 440 450 460 470
 AATACTTTGAGCACTGGTCAGTCAGATCAAGTGGATTGTGGACATCTTATATCCAAATGTGTCAATTACCAACATGGCACATAAACCT
 480 490 500 510 520 530 540 550 560
 GTATCTAAACCTATGTCAGAGAGATTCATAACTGCTCTGCCAGCTGGGGATTGGATCATATCGTGAGAACATTCTGTCAACCTGGAT
 570 580 590 600 610 620 630 640 650
 GCGAAATCACTATGTCGCTGCAACTTGTGCAAGGAATGGTACCGAGTGACCTCTGATGGCATGCTGTGGAAAGAGCTTATCGAGAGAACATGG
 660 670 680 690 700 710 720 730 740 750
 TCAGGACAGATTCTCTGTGGAGAGGCCCTGGCAGAACCAAGAGGATGGGACAGTATTATTCAAAACAAACCTCTGACGGGAATGCTCC
 760 770 780 790 800 810 820 830 840
 CAACTCTTTTATAGAGCACTTTATCCTAAATTATACAGACATTGAGACAAATAGARTCTAATTGGAGATGTGGAAAGACATAGTTACAGAGA
 850 860 870 880 890 900 910 920 930 940
 ATTCACTGCCGAAGTGAACAAAGCAAGGAGTTACTGTTACAGTATGATGATCACAAAATAGTAAGCGGCCCTCGAGACAAACAAATCAAGA
 950 960 970 980 990 1000 1010 1020 1030
 TCTGGATAAAAACACATTGGAATGCAAGCGAACCTCAGGCCATACAGGTTACGTTCTGTCTCCAGTATGATGAGAGAGTGATCATAAAC
 1040 1050 1060 1070 1080 1090 1100 1110 1120
 AGGATCATCGGATTCACCGTCAGACTGTGGATGTAATACAGGTGAAATGCTAAACAGTTGATTGACATTGCAACCTGGGAGGG
 1130 1140 1150 1160 1170 1180 1190 1200 1210 1220
 CGTTCAATAATGCCATGCGTACCTGCTCAAAGATCGTCCATTGCTGTATGGGATATGCCCTCCCCAACTGACATTACCCCTCGGAGGG
 1230 1240 1250 1260 1270 1280 1290 1300 1310
 TCTGGTGGACACCGAGCTGCTGCAATGTTGAGACTTTGATGACAAGTACATTGTTCTGCTCTGGGATAGAACTATAAGGTATGCC
 1320 1330 1340 1350 1360 1370 1380 1390 1400 1410
 CACAAGTACTGTGAATTGTAAGGACCTTAAATGGACACAAACGAGGATTCCCTGTTGCACTACAGGGACAGGCTGGTAGTGAGTCGCTCA
 1420 1430 1440 1450 1460 1470 1480 1490 1500
 TCTGACAAACACTATCAGATTATGGACATAGAATGCGGTCATGTTACAGGAGTGTAGAAGGCCATGAGGAATTGGTGGCTGTATTG
 1510 1520 1530 1540 1550 1560 1570 1580 1590
 ATAACAAGAGGATAGTCAGTGGGCCATATGAAAAATTAAAGTGTGGGATCTGTGGCTTTGGACCCCGTGCTCGAGGGACACT
 1600 1610 1620 1630 1640 1650 1660 1670 1680 1690
 CTGCTACGGACCCCTGGAGCATCCGGAAAGAGTTTCCACTACAGTTGATGAAATCCAGATTGTCAGTAGTTCACATGATGACAAATC
 1700 1710 1720 1730 1740 1750 1760 1770 1780
 CTCATCTGGACTTCTAAATGATCCAGCTCCCAAGCTGAACCCCCCTCTGAAACATACACCTACATCTCGAGATAATAACCA
 1790 1800 1810 1820 1830 1840 1850 1860 1870 1880
 TACACTCACCTCATACTTGGCCAGGACCCATTAAGTGGGTATTTAACGTATCTGCCAATACAGGATGAGCAACACAGTAACAATCAAC
 1890 1900 1910 1920 1930 1940 1950 1960 1970
 TACTGCCAGTTCCCTGGACTAGCCGAGGAGCAGGGTTGAGACTCTGTGGACACAGTTGGTCTGCACTGGGCCAGGACGGTCACTC
 1980 1990 2000 2010 2020 2030 2040 2050 2060
 ACCACAACGTGCTTCAGTGGCTATCAGAAGATGTCCTATCAATTGTAATGATTGGAACCTTAAACCTCCCTCTCCCT
 2070 2080 2090 2100 2110 2120 2130 2140 2150
 CACCTCTGCACCTAGTTTCCATTGGTCCAGACAAAGGTACTTATAAATATTTAGTGTGTTGGCAGAAAAAA

FIG. 3B

10	20	30	40	50	60
MERKDFETWLDNISVTFLSLTDLQNETLDHLISLSGAVQLRHLSSNNETLLKRDFLKLL					
70	80	90	100	110	120
PLELSFYLLKWLDPQTLLTCCLVSKQWNKVISACTEVWQTACKNLGWQIIDDSVQDALHWK					
130	140	150	160	170	180
KVYLKAILRMKQLEDHEAFETSSLIGHSARVYALYYKDGLLCTGSDDLSAKLWDVSTGQC					
190	200	210	220	230	240
VYGIQTHTCAAVKFDEQKLVTGSFDNTVACWEWSSGARTQHFRGHTGAVFSVDYNDELDI					
250	260	270	280	290	300
LVSGSADFTVKVWALSAGTCLNTLTGHTEWVTKVVLQKCKVKSLLHSPGDYILLSADKYE					
310	320	330	340	350	360
IKIWPIGREINCKCLKTLSVSEDRSICLQPRLHFDGKYIVCSSALGLYQWDFASYDILRV					
370	380	390	400	410	420
IKTPEIANLALLGFGDIFALLFDNRYLYIMDLRTESLISRWPPLPEYRESKRGSSFLAGEH					

PG

FIG. 4A

10 20 30 40 50 60 70 80 90
 ATGGAGAGAAAGGACTTTGAGACATGGCTTGATAAACATTCTGTTACATTCTCTGACGGACTTGAGAAGAAATGAAACTCTGGATCACC
 100 110 120 130 140 150 160 170 180
 TGATTTAGTCTGAGTGGGGCAGTCCAGCCTCAGGCATCTCTCCAATAACCTAGAGACTCTCTCAAGGGGACTTCTCAAACTCTCCCCCTGGA
 190 200 210 220 230 240 250 260 270 280
 GCTCAGTTTATTTCTTAAATGGCTCGATECTCAGACTTTACTCACATCCTGCTCTCTAAACAGTGGATAAGGTGATAAGTGCCCTGT
 290 300 310 320 330 340 350 360 370
 ACAGAGGTGTGGCAGACTCCATGTAAGAAATTGGCTGGCAGATAGATGATTCTGTTCAAGGACCTTGCAGTGGAAAGGTTTTGAAGG
 380 390 400 410 420 430 440 450 460 470
 CTATTTGAGAAATGAAGCACTGGAGGACCATGAACCCCTTGAACACCTCGTATTAAATTGGACACAGTGCCAGAGTGTATGCACTTACTACAA
 480 490 500 510 520 530 540 550 560
 AGATGGACTTCTCTGACAGGGTCAGATGACTTGTCTGCAAGCTGTGGGATGTGACCCACAGGGCAGTGGCTTATGGCATCCAGACCCACACT
 570 580 590 600 610 620 630 640 650
 TGTGCAGGGTGAAGTTGATGAAACACAAGCTTGTGACAGGGCTCTTGACAAACACTGTGGCTTGTGGGAATGGACTTCCGGAGCCAGGACCC
 660 670 680 690 700 710 720 730 740 750
 ACCACTTTGGGGGACACGGGGGGCGTATTTAGCGTGGACTACAAATGATGAACTGGATATCTGGTGACCCGCTTGCAAGACTTCACTGTGAA
 760 770 780 790 800 810 820 830 840
 AGTATGGCTTATCTGCTGGACATGCCGAAACACACTCACCGGGCACACGGAAATGGTCACCAACGGTACTTGTGAGAAGTGCAGAAAGTCAAG
 850 860 870 880 890 900 910 920 930 940
 TCTCTCTGACAGTCTGGAGACTACATCCTCTTAAGTGCACACAAATATGAGATTAAGATTGGCAATGGAGAGAAATCAACTGTAAAGT
 950 960 970 980 990 1000 1010 1020 1030
 CCTTAAAGACATTGTCTGCTGAGGATAGAAGTATCTGCCGCAAGCAAGACTTCAATTGATGCCAAATACATTGTCTGTAGTTAGCAGCCT
 1040 1050 1060 1070 1080 1090 1100 1110 1120
 TGGTCTCTACCACTGGACTTTGCCAGTTATGATATTCTCAGGGTCATCAAGACTCCTGAGATAGCAAACTTGGCTTGGCTTGGGTTGGAGAT
 1130 1140 1150 1160 1170 1180 1190 1200 1210 1220
 ATCTTTGCCCTGCTGTTGACAACCGCTACCTGTACATCATGGACTTGGGACAGAGAGGCTGATTAGTCGCTGGCTCTGCCAGAGTACAGGG
 1230 1240 1250 1260 1270 1280 1290 1300 1310
 AATCAAACAGAGGGCTCAAGCTTCTGGCAGGGAAACATCTGGCTGAATGGACTGGATGGGACACATGACACGGGCTTGGCTTGGCTGCCACCCAGC
 1320 1330 1340 1350 1360 1370 1380 1390 1400 1410
 ATCCCTGACCACAGTATTCACTCGTGTGGAAAGGAGCACGGCTGACACCATGAGCCACCAACCGCTGACTGACTTGGGTGCCGGGGCTGCC
 1420 1430 1440 1450 1460 1470
 CGTTTTGGGTGCACCTCTGGGGCACCGCAGCTCCATGAACCAAAGTCTCACCTAATGGTATCATCA

FIG. 4B

10 20 30 40 50 60
MKRGGRDSDRNSSEE GTA EKSKLRTTNEHSQTC DWGNLLQDII LQVFKYLP LLDR AHAS

70 80 90 100 110 120
QVCRNWNQVFHMPDLWRC FEFELNQPAT SYLKATHPE LIKQI IKRHSN H LQYVSFKV DSS

130 140 150 160 170 180
KESAE AACD ILSQLVNC SLKTLGLI STARPSFMDLPKSHF I SALTVV FVN SKSL SSKID

190 200 210 220 230 240
DTPVDDPSLKVLVANNSDTLKLLKMSSCPHVSPAGILCVADQCHGLRELALNYHLLSDEL

250 260 270 280 290 300
LLALSSEKHVRLEHLRIDVVSENPGQTHFTIQKSSWDAFIRHSPKVN LVMYFFLYEEEF

310 320 330 340 350 360
DPFFRYEIPATHLYFGRSVSKDVLGRVGMTCPRLVELVVCANGLRPLDEELIRIAERCKN

370 380 390 400 410 420
LSAIGLGECEVSCSAFVEFVKMCGGRLSQLSIMEEVLIPDQKYSLEQIHW EVSKHLGRVW

FPDMMPTW

FIG. 5A

10 20 30 40 50 60 70 80 90
 CGGGGTGGTGTGGGGAAAGCCGCCCCCGCAGCAGGATGAAACGAGGAGGAAGAGATAGTGACCGTAATTCACTAGAAGAAGGAACGTGAGA
 100 110 120 130 140 150 160 170 180
 GAAATCCAAGAAACTGAGGACTACAAATGAGCATTCAGACTGATGGTAAATCTCTTCAGGACATTATCTCAAGTAAATTAAATAT
 190 200 210 220 230 240 250 260 270 280
 TTGCCCTCTCTGACCCCCGCTATGCTTCACAAGTTGCCGCACTGGAACCCAGTATTACATGCTGACTTGTGGAGATGTTTGAAATTG
 290 300 310 320 330 340 350 360 370
 AACTGAGTCAGCCAGCTACATCTTATTTGAAAGCTACCCATCCAGAGCTGATCAAACAGATTATTAAGACATTCAAAACCATCTACAAATATGT
 380 390 400 410 420 430 440 450 460 470
 CAGCTTCAGGTGGACAGCAGCAAGGAATCAGCTGAAGCAGCTGTGATATACTATCGCACTTGTGAATTGCTTTAAACACTTGGACTT
 480 490 500 510 520 530 540 550 560
 ATTTCAACTGCTGGACCAAGCTTATGGATTTACCAAAGTCTCACTTTATCTCTGCACTGACAGTTGTCTGGTAAACTCCAAACCTGTCTT
 570 580 590 600 610 620 630 640 650
 CGCTTAAGATAGATGATACTCCAGTAGATGATCCATCTCTCAAAGTACTAGTGGCAACAAATAGTGATACACTCAAGCTGGAAAATGAGCAG
 660 670 680 690 700 710 720 730 740 750
 CTGTCCCTCATGTCCTCCAGCAGGTATCCTTGTGGCTGATCAGTGTACGGCTTAAGAGAACTAGCCCTGAACTACCACTTATTGAGTGAT
 760 770 780 790 800 810 820 830 840
 GAGTTGTTACTTGATGTCCTCTGAAAAACATGTTGGATTAGAACATTTGGCATTGATGTACTCAGTGAGAACTACCTGGCACAGACACACTTCC
 850 860 870 880 890 900 910 920 930 940
 ATACTATTCAAGAGTAGCTGGATGCTTTCATCAGACATTCAACCCAAAGTGAACCTTAGTGATGTATTTTTTATATGAAGAAGAATTGAA
 950 960 970 980 990 1000 1010 1020 1030
 CCCCTCTTCGCTATGAAATACCTGCCACCCATCTGTACTTTGGAGATCAGTAAGCAAAGATGTCTGGCCGTGGAAATGACATGCCCT
 1040 1050 1060 1070 1080 1090 1100 1110 1120
 AGACTGGTTGAACTACTAGTGTCGAAATGGATTACGGCCACTTGATGAAAGAGTTACCTGAGCTTGTGGCCGTGGAAATGACATGCCCT
 1130 1140 1150 1160 1170 1180 1190 1200 1210 1220
 TTGGACTACGGGAATGGAAGTCTCATGTAAGTGCTTGTGGAGTTGTGAAGAGATGTCTGGTGGCCGTATCTCAATTATCCATTATGGAAGA
 1230 1240 1250 1260 1270 1280 1290 1300 1310
 AGTACTAATTCTGACCAAAAGTATACTTTGGAGGAGATTCACTGGGAACGTGTCACCAAGTCTGGTAGGGTGTGGTTCCCGACATGATGCC
 1320 1330 1340 1350 1360 1370 1380 1390 1400
 ACTTGGTAAAGACTGCACTGATGAAATTGACCCATTAACTCAAGGAAATGTATTATAATTAAAGTTTATTTGCTGAAACACACACACACACAC

FIG. 5B

10 20 30 40 50 60
MKRNSLSVENKIVQLSGAAKQPKVGFYSSLNQTHHTVLLDWGSLPHVVLQIFQYLPLL

70 80 90 100 110 120
DRACASSVCRRWNEVFHISDLWRKFELNQSATSSFKSTHPDLIQQIICKHFAHLQYVS

130 140 150 160 170 180
FKVDSSAESAEACDILSQLVNCISIQLGLISTAKPSFMNVSEHFVSAUTVVFINSKSL

190 200 210 220 230 240
SSIKIEDTPVDDPSLKILVANNSDTLRLPKMSSCPHSSDGILCVADRCQGLRELALNY

250 260 270 280 290 300
ILTDELFLALSSETHVNLEHLRIDVVSENPGQIKFHAVKKHSWDALIKHSPRVNVVMHFF

310 320 330 340 350 360
LYEEEFFETFFKEETPVTHLYFGRSVSKVVLGRVGLNCPRLIELVVCANDLQPLDNEICI

370 380 390 400 410 420
AEHCTNLTALGLSKCEVSCSAFIRFVRLCERRLTQLSVMEEVLIPDEDYSLDEIHTEVSK

430
YLGRVWFPPDVMPLW

FIG. 6A

10 20 30 40 50 60
 ACATTTCTAATGTTACAGAATGAAGAGGAACAGTTATCTGTTGAGAATAAAATTGTCCAGTGTCA
 70 80 90 100 110 120 130
 GGAGCAGCGAACAGCCAAAAGTTGGGTCTACTCTCTCTCAACCAGAACATACACACACGGTTCTT
 140 150 160 170 180 190 200
 CTAGACTGGGGAGTTGCCCTACCAATGTTAGTACAAATTTCAGTATCTCCCTTACTAGATCGG
 210 220 230 240 250 260 270
 GCCTGTGCATCTCTGTATGTTAGGAGGTGGAATGAAGTTTCATATTCTGACCTTGGAGAAAGTT
 280 290 300 310 320 330 340
 GAATTTGAACAGTAAACAGTCAGCTACTTCATCTTAAGTCCACTCATCCTGATCTCATTCAAGCAGATC
 350 360 370 380 390 400 410
 ATTAAAAAGCATTGCTCATCTTCAGTATGTCAGCTTAAGGTTGACAGTAGCGCTGAGTCAGCAGAA
 420 430 440 450 460 470 480
 GCTGCCCTGTGATATACTCTCAGCTGGTAAATTGTTCCATCCAGACCTTGGGCTTGTGATTTCAACAGCC
 490 500 510 520 530 540 550
 AAGCCAAGTTCATGAATGTCGGAGTCAGCTTGTGTCAGCACTACAGTTGTTTATCAACTCA
 560 570 580 590 600 610 620
 AAATCATTATCATCAATCAAAATTGAAGAGATACACCAGTGGATGATCCTTCATTGAAGAGATTCTGTGGCC
 630 640 650 660 670 680 690
 ATAATAGTGCACACTCTAAGACTCCAAAGATGAGTAGCTGTCCTCATGTTCATCTGATGGAATTCTT
 700 710 720 730 740 750
 TGTGTAGCTGACCGTTGTCAAGGCCTTAGAGAACTGGCGTTGAATTATTACATCCTAACTGATGAACCT
 760 770 780 790 800 810 820
 TTCCCTGCACTCTCAAGCGAGACTCATGTTAACCTTGAACATCTCGAATTGATGTTGAGTGAAAT
 830 840 850 860 870 880 890
 CCTGGACAGATTAATTCATGCTTTAAAAACACAGTTGGGATGCACCTTATTAAACATTCCCTAGA
 900 910 920 930 940 950 960
 GTTAATGTTGTTATGCACTTCTTCTATATGAAGAGGAATTCGAGACGTTCTCAAAAGAAACCCCT
 970 980 990 1000 1010 1020 1030
 GTTACTCACCTTATTGGTCGTTCAAGTCAGCAACTGGTTTAGGACGGGTAGGTCTCAACTGTCCT
 1040 1050 1060 1070 1080 1090 1100
 CGACTGATTGAGTTAGGGTGTGCTAATGATCTCAGCCTCTTGATAATGAACCTTATTGTATTGCT
 1110 1120 1130 1140 1150 1160 1170
 GAACACTGTACAAACCTAACAGCCTGGGCTCAGCAAATGTGAAGTTAGCTGCAGTGCCTTCATCAGG
 1180 1190 1200 1210 1220 1230 1240
 TTTGTAAGACTGTGAGAGAAGGTTAACACAGCTCTGTAATGGAGGAAGTTGATCCCTGATGAG
 1250 1260 1270 1280 1290 1300 1310
 GATTATAGCCTAGATGAAATTCAACTGAAGTCTCCAAATACCTGGGAAGAGTATGGTTCCCTGATGTG
 1320
 ATGCCTCTCTGG

FIG. 6B

10 20 30 40 50 60
MAGSEPRSGTNSPPPFSDWGRLEAAILSGWKTFWQS VSKDRVARTTSREEVDEAASLT

70 80 90 100 110 120
RLPIDVQLYIILSFLSPHDLCQLGSTNH YNNETVRNPILWRYFLLRDLPSWSSVDWKS LPY

130 140 150 160 170 180
LQILKKPISEVSDGAFFDYMAYVLMCCPYTRRASKSSRPMYGA VTSFLHSLIIPNEPRFA

190 200 210 220 230 240
LFGPRLEQLNTSLVLSLLSSEELCPTAGLPQRQIDGIGSGVNFQLNNQHKFNILILYSTT

250 260 270 280 290 300
RKERDRAREEHTSAVNKMFSRHNEGDDRPGSRYSVIPQIQKLCEVVDGFIYVANA EAHKR

310 320 330 340 350 360
HEWQDEF SHIMAMTDPAFGSSGRPLLVLSCISQGDVKRMPCFYLAHELHLLNHPWL VQ

370 380 390 400 410 420
DTEAETLTGFLNGIEWILEEVESKRAR*FSFQILGTETI*NLLRS*CEYLLSQPTLSCL

430 440 450 460 470 480
FADRLSFGQL*LLCFLYYFYFLP*INYKKRVS VLFSPKMNL*TFFW*FLYFLSF*KY*I

L

FIG. 7A

10 20 30 40 50 60
 ATGGCGGGAAAGCGAGCCGCGCAGCGGAACAAATTGGCGCCGGCCCTTCAGCGACTGGGGCGCGCTG
 70 80 90 100 110 120 130
 GAGGCGGCCATCCTCAGCGGCTGGAAGACCTCTGGCAGTCAGTGAGCAAGGATAGGGTGGCGCGTACG
 140 150 160 170 180 190 200
 ACCTCCCGGAGGGAGGTGGATGAGGGGGCCACGACCCCTGACGGGGCTGCCGATTGATGACAGCTATAT
 210 220 230 240 250 260 270
 ATTTTGTCTTCTTCAACCTCATGATCTGTGTCAGTTGGAACTACAAATCATTATTGGAATGAAACT
 280 290 300 310 320 330 340
 GTARGAAATCCAATTCTGTGGAGATACTTTTGTGAGGGATCTTCTTCTTGTGACTGG
 350 360 370 380 390 400 410
 AAGTCTCTCCATATCTACAAATCTTAAAAAAGCTATATCTGAGGTCTGTGATGGTGCATTTTGAC
 420 430 440 450 460 470 480
 TACATGGCAGTCTATCTAATGTGCTGTCATACACAAGAAGAGCTTCAAAATCCAGCCGCTCTATGTAT
 490 500 510 520 530 540 550
 GGAGCTGTCACTCTTTTACACTCCCCTGATCATCCCAATGAAACCTCGATTTGCTCTGTTGGACCA
 560 570 580 590 600 610 620
 CGTTTGGAAACAATTGAAATACCTCTTGGTGTGAGCTTGTCTTCAGAGGAACCTGGCAACAGCT
 630 640 650 660 670 680 690
 GGTTTGCCTCAGAGGCAGATTGATGGTATTGGATCAGGAGTCATTTCAAGTGAACAACCAACATAAA
 700 710 720 730 740 750
 TTCAACATTCTAATCTTATTCAACTACCAGAAAGGAAGAGATAGAGCAAGGGAAAGGACATACAAGT
 760 770 780 790 800 810 820
 CCAGTTAACAGATGTTAGTCAGTCGACACAAATGAAGGTGATGATCGACCAGGAAGCCGGTACAGTGTGATT
 830 840 850 860 870 880 890
 CCACAGATTCAAAACTGTGTGAAGTGTAGATGGGTCATCTATGTTGCAAAATGCTGAACCTCATAAA
 900 910 920 930 940 950 960
 AGACATGAATGGCAAGATGAATTTCATATTATGGCAATGACAGATCCAGCCTTTGGGTCTTCGGGA
 970 980 990 1000 1010 1020 1030
 ACACCAATTGTTGGTTTATCTGTATTCTCAAGGGATGTAAGGAAATGCCCTGTTTATTGGCT
 1040 1050 1060 1070 1080 1090 1100
 CATGAGCTGCATCTGAATCTCTAAATCACCCATGGCTGGTCCAGGATACAGAGGCTGAAACTCTGACT
 1110 1120 1130 1140 1150 1160 1170
 GTTTTTGAATGGCATTGAGTGGATTCTGAGAAGAATGGAATCTAACGCGTCAAGGATGATTCTCTTT
 1180 1190 1200 1210 1220 1230 1240
 CAGATCTGGAACTGAAACCATTTGAAATTATTACTAACGGCTGTGATGTAATATTGCTCAGTCAG
 1250 1260 1270 1280 1290 1300 1310
 CCCACCTTGTCCCTGCCCTTTGCAAGATAGGCTTCATTGGACAGCTATAACTGCTGTGTTTTTATAT
 1320 1330 1340 1350 1360 1370 1380
 TATTTTACTTTTACCATTAATCAATTACAAGAAAAGAGTTCACTGCTTAGTATTAGCCCCAAATG
 1390 1400 1410 1420 1430 1440
 AACCTTTAACATTTTGGTAATTTTATATTCTGTCTTTAAAAATATTAATTTGG

FIG. 7B

10	20	30	40	50	60
MSRRPCSCALPPRCSCSASPASVTAAGRPRPSDSCKEESSTLSVKMKCDFNCNVHSGL					
70	80	90	100	110	120
KLVKPDDIGRLVSYTPAYLEGSCCKDCIKDYERLSCIGSPIVSPRIVQLETESKRLHNKEN					
130	140	150	160	170	180
QHVQQTLNSTNEIEALETSRLYEDSGYSSFSLQSGLSEHEEGSLLEENFGDSLQSCLEQI					
190	200	210	220	230	240
QSPDQYPNKNLLPVLHFEKVVCASTLKKNAKRNPKVDRMLEITARGNFRQLQNIIGRKMG					
250	260	270	280	290	300
LECVIDLSELFRRLRHVLATILAQLSDMDLINVKVSTTWKKILEDDKGAFQLYSKAIQ					
310	320	330	340	350	360
RVTEENNKFSPHASTREYVMFRTPLASVQKSAAQTSLKKDAQTKLSNQGDQKGSTYSRHN					
370	380	390	400	410	420
EFSEVAKTLKKNESLKACIRCNSPAKYDCYLQRATCKREGCGFDYCTKCLCNYHTTKDCS					
430	440				
DGKLLKASCKIGPLPGTKSKKNLRL					

FIG. 8A

10 20 30 40 50 60 70 80 90
 AGCTTGCTCAGCTCCCCCGGAGCGGTCTCCACCTGAGCCAGACACCCACCTGGTTGGATGAGCCGGCCCTCGCAGCTGCGCCCTACGG
 100 110 120 130 140 150 160 170 180
 CCACCCCCGCTGCTCTGCAGCGCCAGCCCCAGCCAGTGACAGGCGGGCCCTCGACCCCTGGATAGTTGTAAGAAGAAAGTTCTACCC
 190 200 210 220 230 240 250 260 270 280
 TTCTCTCCTAAATGAAGTGTGATTTTAACTGTAACCATGTCATCCGGACTTAACCTGGTAAACCTGATGACATGGAAAGACTAGTTCTCA
 290 300 310 320 330 340 350 360 370
 CACCCCTGCATATCTGAAAGGTTCTGTAAGACTGCATTAAGACTATGAAAGGCTGTCATGATGGGTACCGATTTGAGCCCTAGGATT
 380 390 400 410 420 430 440 450 460 470
 GTACAACTGAAACTGAAAGCAAGCGCTTGCAATAACAGAAATCAACATGTCACAGACACTTAATAGTACAAATGAATAGAACACTAG
 480 490 500 510 520 530 540 550 560
 AGACCACTAGACTTTATGAAAGACAGTGGCTATTCTCATTTCTACAAAGTGGCTCAGTGAACATGAAAGGTTAGCCCTGGAGGAGAA
 570 580 590 600 610 620 630 640 650
 TTTCGGTGACAGTCTACAACTCTGGCTGCTACAAATACAAAGGCCAGACCAATATCCCACAAAGTTGCTGCCAGTTCTCATTTGAAAGAA
 660 670 680 690 700 710 720 730 740 750
 GTGCTTGTCAACATTAAGAATGCAAAAGCAATCTAAAGTAGATCGGAGATCTGAAAGGAAATTATAGCCAGAGGAATTTTAGAC
 760 770 780 790 800 810 820 830 840
 TGCAGAATATAATTCCAGAAAGGTTGGGCTAGAATGTTAGATATTCTCAGCGAACCTTTGCAAGGGGACTCAGACATGCTCTAGCAACTAT
 850 860 870 880 890 900 910 920 930 940
 TTTAGCACAACTCAGTACATGGACTTAATCAATGTCATAAGTGACCAACCTGGAAAGAAGATCTAGAACATGATAAGGGGGATTCCAG
 950 960 970 980 990 1000 1010 1020 1030
 TTGTCACAAAGCAATACAAAGAGTTACCGAAACAAATAATTTCACCTCATGCTTCACCCAGAGAAATATGTTATGTTAGAAACCCCCAC
 1040 1050 1060 1070 1080 1090 1100 1110 1120
 TGGCTCTGTTAGAAATCAGCAGGCCAGACTCTCTCAAAAGATGCTCAACCAAGTTATCCAAAGGTGATCAGAAAGGTTCTACTTA
 1130 1140 1150 1160 1170 1180 1190 1200 1210 1220
 TAGTCGACACAAATGAAATTCTCTGAGGTGCAAGACATTGAAAGAAGCAAGGCTCAAGGCTGATTCCCTGTAATTCAACCTGCAAAATAT
 1230 1240 1250 1260 1270 1280 1290 1300 1310
 GATTGCTATTACACGGCAACCTCCAAACGAGAAGGCTGTCATTGATTAGTACCGAAGTGTCTCTGTAATTCTACATACTAAAGACT
 1320 1330 1340 1350 1360 1370 1380 1390 1400 1410
 GTTCAGATGCCAACCTCTCAAAGCCAGTTGTAAAATAGTCCTGGCTGCTACAAAGAAAAGCAAAAGAAATTACGAAGATTGATCTCT
 1420 1430 1440 1450 1460 1470 1480 1490 1500
 TATTAATCAATTGTTACTGATCATGAAATGTTAGTAAAGTGTAGTTTAACTTAAAGGAAATTGTTATGTTGATTTCAATTATGTTG
 1510 1520 1530 1540 1550 1560 1570 1580 1590
 AAATCGGTAGTATCCTGAGGTTTTCTCCCCAGAAGATAAGGAGTAGACACCTCTTAAATATTTCACAATTAAATGAGAAAAAGT
 1600 1610 1620 1630 1640 1650 1660 1670 1680 1690
 TTAATTCCTCAATACAAATCAACAAATTAAAGAAAAAGAAAAGTAGATAGTGTGATACCTGAGGGTAAAAAAATTGATTC
 1700 1710 1720 1730 1740 1750 1760 1770 1780
 TTTTATGTAAGGAAACCCATGCAATTTCACCTAGACAGTCTTAATATGTCGTTTCCATCTGTTAGCATTCTAGACATTCTATGTCCT
 1790 1800 1810 1820 1830 1840 1850 1860 1870 1880
 CTTACTCAATTGATACCAACAGAAATATCAACTCTGGAGTCATTAAATGTCACCTTCTAAAGCTTTTCTAAAGCTTTTCTATGTCGTT
 1890 1900 1910 1920 1930 1940 1950 1960 1970
 CAAGAAAGTATCTTGTAAAGAACTTGCTTGTCTTATTCTGAAATCTGTTAATATTGTTATACATGTAATATTCTGTT
 1980 1990 2000 2010 2020 2030 2040 2050 2060
 TATATGTCAAAGAATATGTCCTTGATGACATATAAAATTTGCTCAATAAAATTGTAAGCTTAAAGAAAAAAACTCGAG
 2070
 ACTAGTGC

FIG. 8B

10 20 30 40 50 60
ARSGASALRRRRVQVVVLSRPPGGDSFRTRPQRGPQPGGSQAMDAPHSKAALDSINE

70 80 90 100 110 120
LPDNILLELFTHVPARQLLNCRVCSLWRDLIDLLTLWKRKCLRKGFITKDWDQPVADW

130 140 150 160 170 180
KIFYFLRSLHRNLLRNPCAENDMFAWQIDFNGGDRWKVDSDLPGAHGTEFPDPKVKKSFVT

190 200 210 220 230 240
SYELCLKWELVDLLADRYWEELLDTFRPDIVVKDWFAARADCGCTYQLKVQLASADYFVL

250 260 270 280 290 300
ASFEPVVTIQQWNNAWTTEVSYTFSDYPRGVRYILFQHGGRTQYWAGWYGPRTVNSSI

310 320 330
VVSPKMTRNQASSEAQPGQKHGQEEAAQSPYGAQQIF

FIG. 9A

10 20 30 40 50 60 70 80 90
 GCGCGTTCCGGGAGCTCGGCCCCCTCGCGTAGGAGGGGGGTGCCAGGTGTCGGTCTGAGCCGGCCCCGGCTGGAGGGGAGACAGCTTCAGGACAC
 100 110 120 130 140 150 160 170 180
 GCAGGGCCAGCGAGGGCCGGCCGGGGATCCAGGCCATGGACGCTCCCCACTCCAAAGCAGCCCTGGACAGCATTAAACGAGCTGCCGA
 190 200 210 220 230 240 250 260 270 280
 TAACATCTGCTGGAGCTGTTACGCACGTGCCGGGGGCCAGCTGCTGCTGAACCTGCCCTGGCTGAGGACCTCTGGGGACCTCATGAC
 290 300 310 320 330 340 350 360 370
 CTCTGACCCCTCTGAAACGCAAGTGCGCTGCCAAAGGGCTCATACCAAGGACTGGGACCAGCCCCGTGGCCGACTGGAAAATCTTCTACTCTCC
 380 390 400 410 420 430 440 450 460 470
 TACCGAGCCCTGCATAGGAACCTCTGCCAACCCCTGCTGAAACGATAATGTTTGCAATGCCAAATTGATTCAATGGTGGGGACCGCTGGAA
 480 490 500 510 520 530 540 550 560
 GGTGGATAGCCTCCCTGGGGACAGAAATTCTGACCCCAAAGTCAGAAAGTCTTTGTCACATCCTACAGAACCTGTGGTTAAGGACTGGTTGGCTGCCAGAG
 570 580 590 600 610 620 630 640 650
 GAGCTGGTGGACCTCTAGCCGACCGCTACTGGGAGGAGCTACTACACACATTCCGGGGGACATGTGGTTAAGGACTGGTTGGCTGCCAGAG
 660 670 680 690 700 710 720 730 740 750
 CCCACTGTGGCTGCCACCTACCAACTCAAAGTCAGCTGGCTCGGCTGACTACTTCGTGTTGGCTCTTCGAGCCCCCACCTGTGACCATCCA
 760 770 780 790 800 810 820 830 840
 ACAGTGGAAACAATGCCACATGGACAGAGGTCTCTACACCTCTCAGACTACCCCGGGGTGTCGGCTACATCCTCTTCAGGACATGGGGCAGG
 850 860 870 880 890 900 910 920 930 940
 GACACCCAGTACTGGCAGGCTGGTATGGGCCCCAGTCACCAACAGCAGCATGCGTCAGCCCCAAGATGACCGAGGAACCGGCTGGCTCG
 950 960 970 980 990 1000 1010 1020 1030
 AGGCTAGCCTGGGAGAACATGGACAGGAGGGCTGCCAATGCCCTACGGACCTGTTGTCAGATTCTGACAGCTGTCCATCCTG
 1040 1050 1060 1070 1080 1090 1100 1110 1120
 TCTGGTCAGCCAGAGGTTCTCCAGGCAGGAGCTGACCATGGGGTGGGACTGAGGCTCCCTGTACCCAGACTCCTGCCCGGTTCAACCCCTA
 1130 1140 1150 1160 1170 1180 1190 1200 1210 1220
 CCAGCTGTGGTAACCTACTGTCACATAGCTCTGACGTTTGTAAATAATGTTTCAAGGCCGGGACTGTGGCTCACCCCTGTAATCCAG
 1230 1240 1250 1260 1270 1280 1290 1300 1310
 CACTTTGGAGACCGAGGGCAGGTGATCACCGAGGTCAAGGAGACAGAACCCATCCTGCCAACACGGTGAAACCCCTGTCTACTAAAAACAA
 1320 1330 1340 1350 1360 1370 1380 1390 1400 1410
 AAAATTAGCCGGGGTGGTGGGGGGCCCTGTAGTCCAGCTACTCGGGAGGCTGATGCCAGAAGAAATGGCGTGAAACCGGAAGGCAGAGCTG
 1420 1430 1440 1450 1460 1470 1480 1490 1500
 AGTCAGCCGAGATCACGCCACTGCACTCCAGCTGGTGACAGAGGGAGACTCTGCTCATAAAAATAATAATAATAATAATAATAATA
 1510 1520 1530
 AATGGTTTCAGTAAAAAAAAAAAAA

FIG. 9B

10 20 30 40 50 60
MSNTRFTITLNYKDPLTGDEETLASYGIVSGDLICLILHDDI PPPNIPSSTDSEHSSLQN

70 80 90 100 110 120
NEQPSLATSSNQTSIQDEQPSDSFQGQAAQSGVWNDDSMGLGPSQNFEAESIQDNAHMAEG

130 140 150 160 170 180
TGFYPSEPLLCSESVEGQVPHSLETLYQSADCSDANDALIVLIHLLMLESGYIPQGTEAK

190 200 210 220 230 240
ALSLPEKWKLSGVYKLQYMHHLCEGSSATLTCVPLGNLIVVNATLKINNEIRSVKRLQLL

250 260 270 280 290 300
PESFICKEKLGENVANIYKDLQKLSRLFKDQLVYPLLAFTRQALNLPNVGLVVLPLELK

310 320 330 340 350 360
LRIFRLLDVRSVLSLSAVCRDLFTAASNDPLLWRFLYLRDFRDNTVRVQD TDWKELYRKRH

370 380 390 400 410 420
IQRKESPKGRFVLLLPSSHTIPFYPNPLHPRPFSSRLPPGIIGGEYDQRPTLPYVGDP

430 440 450 460 470 480
ISSLIPGPGETPSQLPPLRPRFDVGPLPGPNPILPGRGGPNDRFPFRPSRGRPTDGRLS

FM

FIG. 10A

10 20 30 40 50 60 70 80 90
 TGGAAATTCCCATGGACCATGTCATAACCCGATTTACAATTACATTGAACTACAAGGATCCCTCACTGGAGATGAAGAGACCTGGCTTCATA
 100 110 120 130 140 150 160 170 180
 TGGGATATGTTCTGGGGACTTGTATATGTTGATTCACCGATGACATTCCACGGCTTAATATACTTCATOCACAGATTGAGCATTCTCA
 190 200 210 220 230 240 250 260 270 280
 CTCCAGAACAAATGACCAACCCCTCTTGCCACCGCTCCAAATCAGACTAGCATACAGGATGAAACAACCAAGTGAATTCATCCAAAGGACAGGAG
 290 300 310 320 330 340 350 360 370
 CCCAGTCGGTGTGGAAATGACGACAGTATGTTAGGGCTAGTCAAATTGAGCTGAGTCAAATTCAAGATAATGCCATATGGCAGAGGG
 380 390 400 410 420 430 440 450 460 470
 CACAGGTTCTATCCCTCAGAACCCCTGCTCTGTAGTGAATCGGTGGAGGGCAAGTGGCACATTCAATTAGAGACCTTGATCAATCAGCTGAC
 480 490 500 510 520 530 540 550 560
 TGTTCCTGATGCCAATGATGGTTGATAGTGTTGATACATCTTCATGTTGGAGTCAGGTACATACCTCAGGGCACCGAAGCCTAACGACTGT
 570 580 590 600 610 620 630 640 650
 CCCCTGGGGAGAAGTGAAGTTGAGCGGGGTGATAAGCTGCACTACATGCCATCTCTGGAGGGCAGCTCGCTACTCTCACCTGTGTGCC
 660 670 680 690 700 710 720 730 740 750
 TTGGGAAACCTGATGTTGATAATGCTACACTAAAAATCAACAAATGAGATTAGAAGTGTGAAAGATTGAGCTGCTACCCAGAAATCTTTATT
 760 770 780 790 800 810 820 830 840
 TCCAAAGAGAAAATAGGGAAAATGAGCCAAACATATACAAAGATCTTCAGAAACTCTCTCCCTCTTTAAAGACCAGCTGGTGTATCCCTTC
 850 860 870 880 890 900 910 920 930 940
 TGGCTTTACCCGACAAGCACTGAACCTACCAAAATGATTTGGTTGGTCTCTCCATGGAACTGAAACTACGGATCTCCGACTTCTGG
 950 960 970 980 990 1000 1010 1020 1030
 TGTTCGTTCCGTCTGCTTTGCTGGGTTGCTGACCTCTTACTGCTTCAAATGACCCACTCTGTGGAGGTTTTATATCTGGGTGAT
 1040 1050 1060 1070 1080 1090 1100 1110 1120
 TTCCGAGACAAATCTGTCAGAGTTCAAGACACAGATTGAAAGAAGTGTACAGGAAGAGGCACATAAAAGAAAAGAATCCCCAAAGGGCGGT
 1130 1140 1150 1160 1170 1180 1190 1200 1210 1220
 TTGTCCTGCTCTGCCATGTCACCCACACCCATTCCATCTATCCCAACCCCTGACCCATTGGCCATTTCTTAGCTCCGGCTTCCCTCAGG
 1230 1240 1250 1260 1270 1280 1290 1300 1310
 AATTATCGGGGGTGAATATGACCAAAGACCAACACTTCCCTATGTTGGAGACCCAAATCAGTCACTCATTCTGGTCTGGGAGACGCCAC
 1320 1330 1340 1350 1360 1370 1380 1390 1400 1410
 CAGTTACCTCCACTGAGACCAACGCTTGTATCCAGTTGGCCCACTTCCAGGACCTAACCCATCTGGCAGGGCAGGCAGCCCCAAATGACAGAT
 1420 1430 1440 1450 1460 1470 1480 1490 1500
 TTCCCTTAGACCCAGCAGGGTGGGCAACTGATGGGGCTGTCATTCATGATTGATTGATTTCTGATTGTTGAGAGTGTGACTCCAGAACCTTT
 1510 1520 1530 1540 1550 1560 1570 1580 1590
 TGTTCCTAAACTACAGATGTCACTCCTGGGGCTGATGTCAGTGTATTTCTGATTGTTGAGAGTGTGACTCCAGAACCTTT
 1600 1610 1620 1630 1640 1650 1660 1670 1680 1690
 AAGAGATACTTATAGCCCTAGGGTGGTATGACCCAAAGGTTCTCTGTGACAAGGTTGGCTTGGGAATAGTTGGCTGCCAATCTCCCTGC
 1700 1710 1720 1730 1740 1750 1760

FIG. 10B

10	20	30	40	50	60
ETSKLG*SAVLAPAAGGTLSSEGRSAVGILIAVTSTGVDK*SLNQLLHGLGTSSRLSHF					
70	80	90	100	110	120
PFG*KSPPRGQFVAAVEIAGRSGLQMGQGLWRVVRNQQLQQEGYSEQGYLTREQSRRMA					
130	140	150	160	170	180
ASNISNTNHRKVQGGIDYHLLKARKSKEQEGFINLEMLPPELSFTILSYLNATDLCLA					
190	200	210	220	230	240
SCVWQDLANDELLWQGLCKSTWGHCSIYNKNPLGFSFRKXYMQLDEGSLTFNANPDEGV					
250	260	270	280	290	300
NYFMSKGILDSPKEIAKFIFCTRNLNWKKLRIYLDERRDVLDLVTLHNFRNQFLPNAL					
310	320	330	340	350	360
REFFRHIHAPEERGEYLETLITKFSHRCACNPDLMRELGLSPDAVYVLCYSLILLSIDL					
370	380	390	400	410	420
TSPHVKNKMSKREFIRNTRRAAQNISEDFVGHLYDNIYLIGHVAA*KAQLLGLQFLQLQTK					
430	440	450	460	470	480
ATQGLSRYGGYISAGHCSLSIQSSFSVQPFLLPFSILVISLGN*IILQNFS*FCLSRFA					
490	500	510	520	530	540
QSRATV*HSC*RMIN*HYTLKDGVFVH*ICLKNFIFHSLYKYHVMCTYLTKEIYSHNYF					
550	560	570	580	590	600
IVKILTKVFPFLSN*VLKFI*F*SETIVXVKVRSDFRQKPIPASFSFKL*RVLICYYITM					
610	620	630	640	650	
QNWLQLFL*YKFII*FFILKTGLIKSR*VL*TI*DF*NIKIYDLHS*E*NKIXLELW					

FIG. 11A

10 20 30 40 50 60 70 80 90
 CGAAACGTCAAATTGGATAGTOGGCAGTTCTGGCCCCCTGCAGCTGGAGGTACCCCTGAGTTCTGAGGGTCTGAGTGCCTGTTCTGGTATTCTC
 100 110 120 130 140 150 160 170 180
 ATCCGGTCACCTCTACCGGTGCGACAAAGTAAAGTTGAATCAGCTCTCCATGGCCTGGCACCGAGTCCCGGCTGAGCCATTTCCTTTTG
 190 200 210 220 230 240 250 260 270 280
 GCTAAAGTCCCCCCCAGGGCAATTGTCGGGGGGGTGGAGATGCCAGGTGCGCTCAGGCTTGAGATGGTCAAGGGTGTGGAGAGT
 290 300 310 320 330 340 350 360 370
 CGTCAGAACCAACCAAGCAGCTGCAACAAGAAGGCTACAGTCAGCAAGGCTACCTCACCAAGAGGAGCAGGAGAATGGTGGAGAACATTCT
 380 390 400 410 420 430 440 450 460 470
 AACACCAATCATGTAACAAAGTCCAGGAGGCATTGACATATATCATCTTGAAGGCAAGGAATCGAAGAACACGAAGGATTCAATT
 480 490 500 510 520 530 540 550 560
 TCGAAATGTTGCCCTGAGCTAACGTTTACCATCTTGTCCCTACCTGAAATGCAACTGACCTTGCTGGCTCATGTGTTGGCAGGACCTTGC
 570 580 590 600 610 620 630 640 650
 GAATGATGAACTTCTCTGGCAAGGGTGTGCAAATCCACTTGGGTCACTGTTCCATATAACAATAAGAACCCACCTTAGGATTCTTTAGA
 660 670 680 690 700 710 720 730 740 750
 AAATGTATATGCCAGCTGGATGAAAGCAGCCTCACCTTAAATGCCAACCCAGATGAGGGAGTGAACACTTATGTCAGGATGGTATCCTGGATG
 760 770 780 790 800 810 820 830 840
 ATTCCCCAAAGAAATAGCAAAGTTTATCTCTGTAAGAACACTAAATGGAAAAAAACTGAGAAATCTATTTGATGAAACGGAGAGATGTCCT
 850 860 870 880 890 900 910 920 930 940
 GGATGACCTTGTAACTTGCATAATTAGAAATCAAGTTCTTCCAAATGCCACTGAGAGAATTTCGTCAATGCCATGGGCTGAAAGACCG
 950 960 970 980 990 1000 1010 1020 1030
 CGAGAGTATGAAACTCTTATAACAAAGTCTCACATAGATTCTGCTTGCACCCCTGATTATGCGAGAACTTGGCTTACTGTCATGATG
 1040 1050 1060 1070 1080 1090 1100 1110 1120
 CTGCTATGTACTGTGCTACTTTGATTCTACTTCCATTGACCTCACTAGCCCTCATGTGAAGAATAAAATCTCAAAAGGGAAATTATTG
 1130 1140 1150 1160 1170 1180 1190 1200 1210 1220
 AAATACCCGTCGGCTGCTCAAATATTAGTGAAGATTGTAGGGCATCTTATGACAATATCTACCTTATTGGCATGTGGCTGCATAAAAA
 1230 1240 1250 1260 1270 1280 1290 1300 1310
 GCACAACTGCTAGGACTTCAGTTTACTTCAGACTAAAGCTACCCAGGACTTACAGAGATATGGGGTTACATCAGTGTGGTATTGTAGCC
 1320 1330 1340 1350 1360 1370 1380 1390 1400 1410
 TGAGTATACAATCAAGCTTCAGTGTGCAACCTTTTCTTGGCATTTCTATTTTAGTAATTCCCTGGGAACATAATAATTGAGAA
 1420 1430 1440 1450 1460 1470 1480 1490 1500
 TTTTCTAATTCTTATCACGTTTGCACAAAGCAGGCCACTCTAACACACCTGTTAACGAATGATAAACTGACATTATACCTAA
 1510 1520 1530 1540 1550 1560 1570 1580 1590
 GATGGTGTATTGTCATTAGATTGCTGCAAACCTTTTCTCATTACAAATACCATGTAATGTCATATTTAACT
 1600 1610 1620 1630 1640 1650 1660 1670 1680 1690
 AGATTTATAGTCATAATTATTTATTGTAAGAGATTTAACTAAAGTTTCTCTCAACTGAGTTCTGAAATTATTGATTCTGATC
 1700 1710 1720 1730 1740 1750 1760 1770 1780
 TGAAACTATTGTCCTGAAAGTTAGATCTGACTTCAGRCAGAAACCAATACCAAGCTTCTTCTTAAACTTTGAAAGAGTGTGATTG
 1790 1800 1810 1820 1830 1840 1850 1860 1870 1880
 TACTATATTACTATGCAAAACTGGCAGTTATTATATAAATTATAATTGATTTTTATTAAAACCTGGGTTATCAAGTCCTGG
 1890 1900 1910 1920 1930 1940 1950 1960 1970
 AAGTCCTTAAACCATTTAGGATTAAACATCAAATTATGATTACATTACAGGAATAAAAATATYATTAGAACCTGCGT

FIG. 11B

10	20	30	40	50	60
MAAAAVDSAMEVVPALAEEAAPEVAGLSCLVNLPGEVLEYILCCGSLTAADIGRVSSTCR					
70	80	90	100	110	120
RLRELCQSSGKVVKEQFRVRWPSLMKHYSPTDYVNWLEEYKVRQKAGLEARKIVASFSKR					
130	140	150	160	170	180
FFSEHVPNGFSDIENLEGPEIFFEDELVCILNMTEGRKALTWKYYAKKILYYLRQQKILN					
190	200	210	220	230	240
NLKAFLQQPDDYESYLEGAVYIDQYCNPLSDISLKDIQAQIDSIVELVCKTLRGINSRHP					
250	260	270	280	290	300
SLAFKAGESSMIMEIELQSQVLDAMNYVLYDQLKFKGNRMDYYNALNLYMHQVLIRRTGI					
310	320	330	340	350	360
PISMSLLYLTIAQLGVPLEPVNFPSHFLLRWCQGAEGATLDIFDYIYIDAFGKGKQLTV					
370	380	390	400	410	420
KECEYLIGQHVTAAALYGVVNKKVLQRMVGNLLSLGKREGIDQSYQLLRDSLTLAMYP					
430	440	450	460	470	480
DQVQLLLLQARLYFHLGIWPEKVLDILQHIQTLDPGQHGAVGYLVQHTLEHIERKKEEVG					
490	500	510	520	530	540
VEVKLRSDEKHDVCYSIGLIMKHKRYGYNCVIYGWDPTCMMGHEWIRNMNVHSLPHGHH					
550	560	570	580	590	600
QPFYNVLVEDGSCRYAAQENLEYNVEPQEISHPDVGRYFSEFTGTHYIPNAELEIRYPED					
610	620				
LEFVYETVQNIYSAKKENIDE					

FIG. 12A

10 30 30 40 50 60 70 80 90 100 110 120 130
 140 150 160 170 180 190 200 210 220 230 240 250 260 270
 280 290 300 310 320 330 340 350 360 370 380 390 400 410
 420 430 440 450 460 470 480 490 500 510 520 530 540 550
 560 570 580 590 600 610 620 630 640 650 660 670 680 690
 700 710 720 730 740 750 760 770 780 790 800 810 820 830
 840 850 860 870 880 890 900 910 920 930 940 950 960 970
 980 990 1000 1010 1020 1030 1040 1050 1060 1070 1080 1090 1100 1110
 1120 1130 1140 1150 1160 1170 1180 1190 1200 1210 1220 1230 1240 1250
 1260 1270 1280 1290 1300 1310 1320 1330 1340 1350 1360 1370 1380 1390
 1400 1410 1420 1430 1440 1450 1460 1470 1480 1490 1500 1510 1520
 1530 1540 1550 1560 1570 1580 1590 1600 1610 1620 1630 1640 1650 1660
 1670 1680 1690 1700 1710 1720 1730 1740 1750 1760 1770 1780 1790 1800
 1810 1820 1830 1840 1850 1860 1870 1880 1890 1900 1910 1920 1930 1940
 1950 1960 1970 1980 1990 2000 2010 2020 2030 2040 2050 2060 2070 2080
 2090 2100 2110 2120 2130 2140 2150 2160 2170 2180 2190 2200 2210 2220
 2230 2240 2250 2260 2270 2280 2290 2300 2310 2320 2330 2340 2350 2360
 2370 2380 2390 2400 2410 2420 2430 2440 2450 2460 2470 2480 2490 2500
 2510 2520 2530 2540 2550 2560 2570 2580 2590 2600 2610 2620 2630 2640
 2650 2660 2670 2680 2690 2700 2710 2720 2730 2740 2750 2760 2770 2780
 2790 2800 2810 2820 2830 2840 2850 2860 2870 2880 2890 2900 2910 2920
 2930 2940 2950 2960 2970 2980 2990 3000 3010 3020 3030 3040 3050
 3060 3070 3080 3090 3100 3110 3120 3130 3140 3150 3160 3170 3180 3190
 3200 3210 3220 3230 3240 3250 3260 3270 3280 3290 3300 3310 3320 3330
 3340 3350 3360 3370 3380 3390 3400 3410 3420 3430 3440 3450 3460 3470
 3480 3490 3500 3510 3520 3530 3540 3550 3560 3570 3580 3590 3600 3610
 3620 3630 3640 3650 3660 3670 3680 3690 3700 3710 3720 3730 3740 3750
 3760 3770 3780 3790 3800 3810 3820 3830 3840 3850 3860 3870 3880 3890
 3900 3910 3920 3930 3940 3950 3960 3970 3980 3990 4000 4010 4020 4030
 4040 4050 4060 4070 4080 4090 4100 4110 4120 4130 4140 4150 4160

FIG. 12B

10	20	30	40	50	60
RSTGFRAGEEWSR*XLAASPGXLRRPAXTFVLSNLAEVVERVLTFLPAKALLRVACVCR					
70	80	90			
LWRECVRRVLRTHRSVTWISAGLAEAGHLXGH					

FIG. 13A

10 20 30 40 50 60
CCGTAGTACTGGNTTCCGGCGGGCTGGTGAGGAATGGAGCCGGTAGNTGCTTGCAGCGAG

70 80 90 100 110 120
TCCCGGGNTCCTCCGTAGACCCCGCGGANACCTTCGTGTTGAGTAACCTGGCGGAGGTGGT

130 140 150 160 170 180
GGAGCGTGTGCTCACCTTCCCTGCCCGCCAAGGCAGTTGCTGCAGGTGGCCTGCGTGTGCCG

190 200 210 220 230 240
CTTATGGAGGGAGTGTGTGCGCAGAGTATTGCGGACCCATCGGAGCGTAACCTGGATCTC

250 260 270
CGCAGGCCTGGCGGAGGCCGGCACCTGGNGGGCATT

FIG. 13B

10 20 30 40 50 60
RPRPVQQQQQQQQPPQQPPQQPPQQQQPPQQQQQQQQPPPPPPPLPQERNNVG

70 80 90 100 110 120
ERDDDVPADMVAEESGPAGAQNSPYQLRRKTLLPKRTACPTKNSMEGASTSTTENFGHRAK

130 140 150 160 170 180
RARVSGKSQDLSAAPAEQYLQEKL PDEVVLKIFS YLLEQDLCRAACVCKRFSELANDPNL

190
WKRLYMEVFEYTRPMMH

FIG. 14A

10 20 30 40 50 60
GCGGCCGCGCCCGGTGCAGCAACAGCAGCAGCAGCCCCCGCAGCAGGCCGCCAGCC

70 80 90 100 110 120
GCCCGAGCAGCAGCCGCCAGCAGCAGCAGCCTCCGCCGCCAGCAGCAGCAGCAGCA

130 140 150 160 170 180
GCAGCCTCCGCCGCCACCAGCCCTCCGCCCTGCCTCAGGAGCGGAACAACGTCGG

190 200 210 220 230 240
CGAGCGGGATGATGATGTGCCCTGCAGATATGGTTGCAGAAGAATCAGGTCCCTGGTGCACA

250 260 270 280 290 300
AAATAGTCCATACCAACTTCGTAGAAAAACTCTTTGCCGAAAAGAACAGCGTGTCCCAC

310 320 330 340 350 360
AAAGAACAGTATGGAGGGCGCCTCAACTCAACTACAGAAAACCTTGGTCATCGTGCAAA

370 380 390 400 410 420
ACGTGCAAGAGTGTCTGGAAAATCACAGATCTATCAGCAGCACCTGCTGAACAGTATCT

430 440 450 460 470 480
TCAGGAGAAAATGCCAGATGAAGTGGTTCTAAAATCTTCTTTACTTGCTGGAACAGGA

490 500 510 520 530 540
TCTTGTAGAGCAGCTTGTATGTAAACGCTTCAGTGAACCTGCTAATGATCCCAATTT

550 560 570 580 590
GTGGAAACGATTATATGGAAGTATTGAATATACTCGCCCTATGATGCAT

FIG. 14B

10	20	30	40	50	60
RPRPGLRGGRAPCEVTMEAGGLPLELWRMILAYLHLPDLGRCSLVCRAWYELILSLDSTR					
70	80	90	100	110	120
WRQLCLGCTECRHPNWPQNQPDVEPESWREAFKQHYLASKTWTKNALDLESSICFSLFRRR					
130	140	150	160	170	
RERRTLSVGPGRFDSDLGSALAMASLYDRIVLFPGVYEEQGEIILKVPVEIVGQQKLG					

FIG. 15A

10 20 30 40 50 60
GCGGCCGCGGCCGGACTCCGCGGTGGCGAGCGCCCTGTGAGGTGACCATGGAGGCTGG
70 80 90 100 110 120
TGGCCTCCCCCTGGAGCTGTGGCGCATGATCTTAGCCTACTTGCACCTCCCGACCTGGG
130 140 150 160 170 180
CCGCTGCAGCCTGGTATGCAGGGCCTGGTATGAAC TGATCCTCAGTCTCGACAGCACCCG
190 200 210 220 230 240
CTGGCGGCAGCTGTCTGGGTTGCACCGAGTGCCGCCATCCCAATTGGCCCAACCAGCC
250 260 270 280 290 300
AGATGTGGAGCCTGAGTCTGGAGAGAAGCCTTCAGCAGCATTACCTTGCATCCAAGAC
310 320 330 340 350 360
ATGGACCAAGAACATGCCTTGGACTTGGAGTCTCCATCTGCTTTCTCTATTCCGCCGGAG
370 380 390 400 410 420
GAGGGAACGACGTACCCCTGAGTGTGGCCAGGCCGTGAGTTGACAGCCTGGCAGTGC
430 440 450 460 470 480
CTTGGCCATGCCAGCCTGTATGACCGAATTGTGCTCTCCAGGTGTGTACGAAGAGCA
490 500 510 520 530
AGGTGAAATCATCTTGAAGGTGCCTGTGGAGATTGTAGGGCAGGGAAAGTTGGGTGA

FIG. 15B

10	20	30	40	50	60
ETETAPLTESLPTDPLLILSFLDYRDLINCCYVSRRSQLSSHDPLWRRHCKYWLI					
70	80	90	100	110	120
EEEKTQKNQCWKSLFIDTYSDVGRYIDHYAAIKKASGMISRNIWSPGVLGWVL					
130	140	150	160	170	180
RGRPRCCGSADWAASFLEDDYRCSYRIHNGQKLGVSGWGYWEAWHCLITIVLKIC*TSIQLP					
190	200	210	220	230	240
EIPAETGTEILSPFNFCIHTGLSQYIAVEAAEG*NNNEVFYQCQTVERVFKYGIKMCSDG					
250					
CINGMH*VFS					

FIG. 16A

10 20 30 40 50 60
 GAGACCGAGACGGCGCCGCTGACCCCTAGAGTCGCTGCCACCGATCCCCTGCTCCTCATC
 70 80 90 100 110 120
 TTATCCTTTTGGACTATCGGGATCTAACACTAACTGTTGTTATGTCAGTCGAAGAGATTAAGC
 130 140 150 160 170 180
 CAGCTATCAAGTCATGATCCGCTGTGGAGAACAGACATTGCAAAAAAAACTGGCTGATATCT
 190 200 210 220 230 240
 GAGGAAGAGAAAACACAGAACAGAACATCAGTGTGGAAATCTCTTCTCATAGATACTTACTCT
 250 260 270 280 290 300
 GATGTAGGAAGAGATACTTGACCATTATGCTGCTATTAAAAAGGCCTGGGAATGATCTCA
 310 320 330 340 350 360
 AGAAATATTGGAGGCCAGGTGTCCTCGGATGGTTTATCTCTGAAAGAGGGGTGCTCG
 370 380 390 400 410 420
 AGAGGAAGACCTCGATGCTGTGGAAAGCGCAGATTGGGCTGCAAGTTCCCTGGACGATTAT
 430 440 450 460 470 480
 CGATGTTCATACCGAATTACAATGGACAGAACAGTTAGTGGTTCTGGGTTATTGGAA
 490 500 510 520 530 540
 GCATGGCACTGTCTAACATCGTTCTGAAGATTTGTTAGACGTCGATACAGCTGCCG
 550 560 570 580 590 600
 GAGATTCCAGCAGAGACAGGGACTGAAATACTGTCTCCCTTAACCTTGCATACATACT
 610 620 630 640 650 660
 GGTTGAGTCAGTACATAGCAGTGGAAAGCTGCAGAGGGTTGAAACAAAAATGAAGTTTC
 670 680 690 700 710 720
 TACCAATGTCAGACAGTAGAACGTGTGTTAAATATGGCATTAAGATGTGTTCTGATGGT
 730 740 750
 TGTATAAATGGCATGCATTAGGTATTTCAAG

FIG. 16B

10 20 30 40 50 60
GSGFRAGGWPLTMPGKHQHFQEPEVGCCGKYFLFGFNIVFWVLGALFLAIGLWAEGEKGV

70 80 90 100 110 120
LSNISALTDLGGLDPVWLVCGSWRRHVGAGLCWAAIGALRENTFLLKFFXXFLGLIFFLE

LA

FIG. 17A

10 20 30 40 50 60
GGCTCCGGTTCCGGGCCGGCGGGTGGCCGCTCACCATGCCCGGNAAGCACCAGCATTTC

70 80 90 100 110 120
CAGGAACCTGAGGTCGGCTGCTGCCGGAAATACTCCCTGTTGGCTTCAACATTGTCTTC

130 140 150 160 170 180
TGGGTGCTGGGAGCCCTGTTCTGGCTATCGGCCTCTGGCCTGGGCTGGGTGAGAAGGGCGTT

190 200 210 220 230 240
CTCTCGAACATCTCAGCGCTGACAGATCTGGGAGGCCTTGACCCCGTGTGGCTTGT

250 260 270 280 290 300
GGTAGTTGGAGGCCTCATGTCGGTCTGGCTGGGCTTGCTGGCTGCAATTGGGGCCCTCCGG

310 320 330 340 350 360
GAGAACACCTTCCTGCTCAAGTTCTNCNGTTCCCTGGTCTCATTTCTTCCTGGAG

CTGGCAAC

FIG. 17B

10	20	30	40	50	60
AAAAAAAYLDELPEPLLRVLAALPAAELVQACRLVCLRWKELVDGAPLWLLKCQQEGLVP					
70	80	90	100	110	120
EGGVEEERDHWQQFYFLSKRRRNLLRNPCGEEDLEGWCDVEHGGDGWRVEELPGDAGV					
130	140	150	160	170	180
THDESVKKYFASSFEWCRKAQVIDLQAEGYWEELLDTTQPAIVVKDWYSGRSDAGCLYEL					
190	200	210	220	230	240
TVKLLSEHENVLAEFSSGQVAVPQDSDGGGWMEISHTFTDYGPGVRFVRFEHGGQGSVY					
250					
KGWFGARVTNSSVWVEP*					

FIG. 18A

10 20 30 40 50 60
 GCGGGAGGGCCGCCGCCGCTACCTGGACGAGCTGCCCGAGCCGCTGCTGCGCGTGCTGGCCGCACTG
 70 80 90 100 110 120 130
 CCGGGCCGCCGAGCTGGTGCAGGCCCTGCCGCCCTGGTGTGCCTGCGCTGGAAGGAGCTGGTGGACGGCGCC
 140 150 160 170 180 190 200
 CCGCTGTGGCTGCTCAAGTGCCAGCAGGAGGGCTGGTGCCTGCCAGGGCGGCGTGGAGGAGGAGCGCGAC
 210 220 230 240 250 260 270
 CACTGGCAGCAGTCTACTTCCTGAGCAAGCGGCCGCAACCTCTGCGTAACCCGTGTGGGGAAAGAG
 280 290 300 310 320 330 340
 GACTTGGAAAGGCTGGTGTGACGTGGAGCATGGTGGGGACGGCTGGAGGGTGGAGGAGCTGCCTGGAGAC
 350 360 370 380 390 400 410
 AGTGGGGTGGAGTTCACCCACGATGAGAGCGTCAAGAAGTACTTCGCCTCCCTCTTGAGTGGTGTGCG
 420 430 440 450 460 470 480
 AAAGCACAGGTCAATTGACCTGAGGCTGAGGGCTACTGGGAGGAGCTGCTGGACACGACTCAGCCGCC
 490 500 510 520 530 540 550
 ATCGTGGTGAAGGACTGGTACTCGGGCCGCAGCGACGCTGGTTGCCTCTACGAGCTCACCGTTAAGCTA
 560 570 580 590 600 610 620
 CTGTCCGAGCACGAGAACGTGCTGGTGAAGTTAGCAGCAGCGGGCAGGTGGCAGTGCCCCAACAGACAGTGAC
 630 640 650 660 670 680 690
 GGCGGGGGGCTGGATGGAGATCTCCCACACCTTCACCGACTACGGGCCGGCGTCCGCTTCGTCCGCTTC
 700 710 720 730 740 750
 GAGCACGGGGGGCAGGGCTCCGTACTGGAAAGGGCTGGTTGGGGCCCCGGTGACCAACAGCAGCGTG
 760 770
 TGGGTAGAACCCCTGA

FIG. 18B

10 20 30 40 50 60
MGEKAVPLLRRRVKRSCPSCGSELGVEEKRGKGNPISIQLFPPELVEHIISFLPVRDLV

70 80 90 100 110 120
ALGQTCRYFHEVCDGEGVWRRICRRLSPRLQDQDTKGLYFQAFGGRRRCLSksVAPLLAH

130 140 150 160 170 180
GYRRFLPTKDHVFILDYVGTLFFLKNALVSTLGQMOWKRACRYVVLCRGAKDFASDPRCD

190 200 210 220 230 240
TVYRKLYVLATREPQEVVGTSSRACDCVEVYLQSSGQRVFKMTFHHSMTFKQIVLVGQ

250 260 270 280 290 300
ETQRALLLITEEGKIYSLVVNETQLDQPRSYTQLALRKVSHYLPHLRVACMTSNQSSTL

310
YVTDPILCSWLQPPWPAGG

FIG. 19A

10 20 30 40 50 60
 ATGGGCGAGAAGGCGGTCCCTTGCTAAGGAGGAGGCGGGTGAAGAGAAGCTGCCCTTGTGGCTCG
 70 80 90 100 110 120 130
 GAGCTTGGGTTGAAGAGAAGAGGGGAAAGGAAATCCGATTCCATCCAGTTGTTCCCCCAGAGCTG
 140 150 160 170 180 190 200
 GTGGAGCATATCATCTCATTCCCTCCCAGTCAGAGACCTTGGCCCTCGGCCAGACCTGCCCTACTTC
 210 220 230 240 250 260 270
 CACGAAGTGTGCGATGGGAAGGCCTGTGGAGACGCATCTGTCGCAGACTCAGTCCGCGCTCCAAGAT
 280 290 300 310 320 330 340
 CAGGACACGAAGGGCCTGTATTCCAGGCATTGGAGGCCGCCGATGTCTCAGCAAGAGCGTGGCC
 350 360 370 380 390 400 410
 CCCCTGCTAGCCCACGGCTACCGCCGCTTGTGCCCACCAAGGATCACGTCTCATTGACTACGTG
 420 430 440 450 460 470 480
 GGGACCCCTCTTCTTCTCAAAAATGCCCTGGCTCCACCCCTGGCCAGATGCAGTGGAAAGGGCCTGT
 490 500 510 520 530 540 550
 CGCTATGTTGTTGTCGTGGAGCCAAGGATTTGCCCTGGACCCAAGGTGTGACACAGTTACCGT
 560 570 580 590 600 610 620
 AAATACCTCTACGTCTGGCCACTCGGGAGCCGCAGGAAGTGGTGGTACCAACCAAGCAGCCGGCCTGT
 630 640 650 660 670 680 690
 GACTGTGTGAGGTCTATCTGCAGTCTAGTGGGAGGGGTCTTCAAGATGACATTCCACCACTCAATG
 700 710 720 730 740 750
 ACCTTCAGCAGATCGTGTGGTAGTGAATGAGACCCAGCTGACCGCCACGCTCCTACACGGTTAGCTGGCC
 760 770 780 790 800 810 820
 AAGATCTACTCTTGGTAGTGAATGAGACCCAGCTGACCGCCACGCTCCTACACGGTTAGCTGGCC
 830 840 850 860 870 880 890
 CTGAGGAAGGTGTCCCACCTACCTGCCTCACCTGCGCTGGCTGCATGACTTCCAACCAGAGCAGCACC
 900 910 920 930 940 950
 CTCTACGTACAGATCCTATTCTGTGCTCTGGCTACAACCACCTGGCTGGATGA

FIG. 19B

10	20	30	40	50	60
RGGSEGRGRGREKRARGARRRKQGGREARAADGEGGSGPGAEAGARTRPREEAEGGGSV					
70	80	90	100	110	120
EEGARGIIKGDEGSVGAGKEAQGRKYGKEEWRVRARRREGARPGRVQGQGGQVWAYIPGT					
130	140	150	160	170	180
GAAMAAAAREEEEAARESAACPAAGPALWRLPEVLLLHMCSYLDMRALGRLAQVYRWLW					
190	200	210	220	230	240
HFTNC DLLRRQIAWASLNSGFTRLGTNLMTSVPVKVSQNIVGCCREGILLKWRCSQMPW					
250	260	270	280	290	300
MQLEDDALYISQANFILAYQFRPDGASLNRQPLGVSA GHDEDVCHFVLATSHIVSAGGDG					
310	320	330	340	350	360
KIGLGKIHSTFAAKYWAHEQE VNCVDCKGGIISFGSRDRTAKVWPLASGQLGQCLYTIQT					
370	380	390	400	410	420
EDQIWSVAIRPLLSSFVTGTACCGHFSPLKIWDLNSGQLMTHLD RDP PRAGVLDVIYES					
430	440	450	460	470	480
PFALLSCGYDTYVRYWDCRTSVRKCVMEWEEPHNSTLYCLQTDGNHLLATGSSFYSVVRL					
490	500	510	520	530	
WDRHQRACPHTFPLTSTRLGSPVYCLHLT KHYAALSYNLHVLDIQNP*					

FIG. 20A

10 20 30 40 50 60 70 80 90
 CGAGGGGAAGCGAAGGAAGGGAAAGAGGAAGGGAAAAGCGAGGGAGAGGGGAAAGCGGGAAAGAGGAAGCAGGGCGGAAGCGGAAGGCCCGGGCGG
 100 110 120 130 140 150 160 170 180
 CAGACGGCGAAGGACCGAGCGGGGGGGGGCTGAGGCGGGAGCCAGGACACGCCAAGAGAGGAAAGCAGGGAGGCGGAAGCGCTGGAGGAAGG
 190 200 210 220 230 240 250 260 270 280
 CGCGAGAGGCATCATCAAGGAGATGAGGGAGCGTACGGGCCCCGAAACAGGCACAAGGAAGAAAGTATGGAGGGAGGAATGGAGGTCAAGG
 290 300 310 320 330 340 350 360 370
 CCTAGGGGGGGAGGGGCGCAGGCCGGGARGAGTACARGGACAGGGAGGTCAAGGCTACATCCCCGGGACAGGGCGGCCATGGGG
 380 390 400 410 420 430 440 450 460 470
 CGGCACCCAGGGAGGAGGAGGAGGAGGAGGCGGCTCGGGAGTCAGCCCGCTCCCCGGCTGGGGGGGAGCGCTGGCGCTGCCGGAAAGTC
 480 490 500 510 520 530 540 550 560
 GCTGCCACATGTGCTCCTACCTCGACATGCCGCCCTCGGCCAGGTGTACCGCTGGCTGTGGCACTTCAACCAACTGCCACCTGGCTC
 570 580 590 600 610 620 630 640 650
 CGGGCCAGATAGCCTGGCCCTGCCCTAACCTCGGCCACGGCTCGGACCAACCTGATGACCAAGTGTGCCAGTGAAGGTGCTCAAGAAC
 660 670 680 690 700 710 720 730 740 750
 GGATAGTGGGTGCTCCGAGAGGGGATTCTGCTGAAGTGGAGATGCACTCAGATGCCCTGGATGCAAGCTAGAGGATGATGCTTGTACATATC
 760 770 780 790 800 810 820 830 840
 CCAGGCTAATTTCTGGCTACAGTCCGTCAGATGGTCCAGCTTGAACCGTCAGCCCTCTGGAGTCTGGCTGGGATGATGAGGAC
 850 860 870 880 890 900 910 920 930 940
 GTTGGCACTTTGTGCTGGCCACCTGGATATTGTCAGTGCAGGAGGAGATGGAAGATTGGCTTGGTAAGATTACACGCCCTGGCTGGCA
 950 960 970 980 990 1000 1010 1020 1030
 AGTACTGGCTCATGAAACAGGAGGTGAACCTGCTGGATTCCAAGGGGGCATCATATCATTTGGCTCCAGGGACAGGACGGCAAGGTGTGGCC
 1040 1050 1060 1070 1080 1090 1100 1110 1120
 TTGGGCTCAGGCCAGCTGGGAGTGTGTTATACACCATCCAGACTGAAAGACCAATCTGGCTGTGCTATCAGGCCATTACTCAGCTCTT
 1130 1140 1150 1160 1170 1180 1190 1200 1210 1220
 GTGACACGGACGGCTTGTGCGCACTTCTCACCCCTGAAAATCTGGGACCTAACAGTGGCAGCTGATGACACACTTGGACAGAGACTTTC
 1230 1240 1250 1260 1270 1280 1290 1300 1310
 CCCCAAGGGCTGGGTGCTGGATGTCATATATGAGTCCCCCTTGCACACTGCCTCTGTGGCTATGACACCTATGTTGCTACTGGGACTGGCG
 1320 1330 1340 1350 1360 1370 1380 1390 1400 1410
 CACCACTGCTGGAAATGTCATGGAGTGGAGGAGGGGACAAACAGCACCCCTGACTGCTCCAGACAGATGGCAACCAACTTGGCTGGCA
 1420 1430 1440 1450 1460 1470 1480 1490 1500
 GGTCTCTCTCTATAGCGTTGACGGCTGTCGGACGGGACCAAAGGGGCTGGCGACACCTTCCGCTGACGTCGACCCGCTGGCGAGCC
 1510 1520 1530 1540 1550 1560 1570 1580 1590
 CTGTCAGTGCATCTCACCAAGCATCTATGCTGGCTGTCTTACACCTCCACGCTCTGGATATTCAAAACCCGCTGACGTCGACCCGCTGGCGAGCC

FIG. 20B

10 20 30 40 50 60
LILTSVLLFQRHGYCTLGEAFNRLDFSSAIQDIRTFNYVVKLLQLIAKSQLTSLSGVAQK

70 80 90 100 110 120
NYFNILDKIVQKVLDHHNPRLIKDLLQDLSSSTLCILIRGVGKSVLVGNINIWICRLETI

130 140 150 160 170 180
LAWQQQLQDLQMTKQVNNGLTLSDLPLHMLNNILYRFSDGWDIITLGQVTPTLYMLSEDR

190 200 210 220 230 240
QLWKKLCQYHFAEKQFCRHLILSEKGHIEWKLMYFALQKHYPAKEQYGDTLHFCRHCSIL

250 260 270
FWKDGSHPCTAADPDSCFTPVSPQHFIDLFKF

FIG. 21A

10 20 30 40 50 60
 GCATTGCTATAATTTACTATACATCTCATCTAAATCTAAAATCAGTCTCAAAATAAAACAAATTGTC
 70 80 90 100 110 120 130
 CTTGCCAAAATTTTTAATCGACAATTGACATTACTGCCAATTCTTTGGCTAATTGAC
 140 150 160 170 180 190 200
 TAATTTAACCTCTGTGTTGCTTCCAGAGGCATGGCTATTGCACCTGGGAGAAGCCTTAATCGGT
 210 220 230 240 250 260 270
 TAGACTTCTCAAGTCAATTCAAGATATCCGAACGTTCAATTATGTGGTCAAACACTGTTGCAGCTAATTG
 280 290 300 310 320 330 340
 CAAAATCCCAGTTAACCTCATTGAGTGGCGTGGCACAGAAGAATTACTTCACACATTGGATAAAATCG
 350 360 370 380 390 400 410
 TTCAAAAGGTCTTGATGACCACCACAATCCTCGTTAACAAAGATCTCTGCAAGACCTAAGCTCTA
 420 430 440 450 460 470 480
 CCCCTCTGCATCTTATTAGAGGAGTAGGGAACTCTGTATTAGGGAAACATCAATATTGGATTGCCC
 490 500 510 520 530 540 550
 GATTAGAAACTATTCTCCCTGGCAACAACAGCTACAGGATCTCAGATGACTAAGCAAGTGAACAATG
 560 570 580 590 600 610 620
 GCCTCACCCCTCAGTGACCTTCCTCTGCACATGCTGAACAACATCCTATACCGGTCTCAGACGGATGGG
 630 640 650 660 670 680 690
 ACATCATCACCTTAGGCCAGGTGACCCCCACGTTGTATATGCTTAGTGAAGACAGACAGCTGTGGAAGA
 700 710 720 730 740 750
 AGCTTTGTCAGTACCAATTGCTGAAAGCAGTTTGATGACATTGATCCTTCAGAAAAAGGTCAATA
 760 770 780 790 800 810 820
 TTGAATGGAAGTTGATGTACTTGCACTTCAGAAACATTACCCAGCGAAGGAGCAGTACGGAGACACAC
 830 840 850 860 870 880 890
 TGCATTTCTGCGGCACTGCAGCATTCTCTTGGAGGACTCAGGACAQCCCTGCACGGCGGCCGACC
 900 910 920 930 940 950 960
 CTGACAGCTGCTTCACGCCGTGTCCTCCGAGCACTTCATCGACCTCTCAAGTTAAGGGCTGCC
 970 980 990 1000 1010 1020 1030
 TGCCATCCCTATTGGAGATTGTGAATCCTGCTGTGAGGGCTCATAGTGAGTGTCTGTGAGGTG
 1040 1050 1060 1070 1080 1090 1100
 GGTGGAGACTCCTCGGAAGCCCTGCTTCCAGAAAGCCTGGAGAACTGCCCTCTGCAAAGGGGGGA
 1110 1120 1130 1140 1150 1160 1170
 CTGCATGGTTGCATTTCACTGAAAGTCAGAGGCCAAGGAAATCATTCTACTCTTTAAAAACTC
 1180 1190 1200 1210

FIG. 21B

10 20 30 40 50 60
YGSEGKGSSSISSDVSSSTDHTPTKAQKNVATSESDLMSRTLSTPSPALICPPNLPGFQ

70 80 90 100 110 120
NGRGSSTSSSSITGETVAMVHSPPPTRLTHPLIRLASRPQKEQASIDRLPDHSMVQIFSF

130 140 150 160 170 180
LPTNQLCRCARVCRRWYNLAWDPRLWRTIRLTGETINVDRALKVLTRRLCQDTPNVCLML

190 200 210 220 230 240
ETVTVSGCRLTDRLGLYTIAQCCPELRRLEVSGCYNISNEAVFDVVSLCPNLEHLDVSGC

250 260 270 280 290 300
SKVTCISLTREASIKLSPLHGKQISIRYLDMTDCFVLEDEGLHTIAAHCTQLTHLYLRRC

310 320 330 340 350 360
VRLTDEGLRYLVIYCASIKEVSDCRFVSDFGLREIAKLESRLRYLSIAHCGRVTDVGI

370 380 390 400 410 420
RYVAKYCSKLRYLNARGCEGITDHGVEYLAKNCTKLKSLDIGKCPLVSDTGLECLALNCF

430 440 450 460 470 480
NLKRLSLKSCESITGQQLQIVAANCFDLQTLNVQDCEVSVEALRFVKRHCKRCVIEHTNP

AFF

FIG. 22A

FIG. 22B

10 20 30 40 50 60
AAPAPAPAPPTPEEGPDAGWGDRIPLEILVQIFGLLVAADGPMPFLGRAARVCRRWQE

70 80 90 100 110 120
AASQPALWHTVTLSSPLVGRPAKGGVKAEKLLASLEWLMPNRFSQLQRLTLIHWKSQVH

130 140 150 160 170 180
PVLKLVGECCPRLTFLKLSGCHGVTADALVMLAKACCQLHSSDLQHSMVESTAVVSFLEE

190 200 210 220 230 240
AGSRMRKLWLTYSSQTTAILGALLGSCCPQLQVLEVSTGINRNSIPLQLPVEALQKGCPQ

250 260 270 280
LQVLRLLNLMWLPKPPGRGVAPGPGFPSLEELCLASSTCNFVS

FIG. 23A

10 20 30 40 50 60
 TGCGGCCGCGCCCGCACCCGACCGGCACCCACGCCACGCCAGGAAGGGCCGACGCCGGCTGGGG
 70 80 90 100 110 120 130
 AGACCGCATCCCTTGGAAATCCTGGTGCAGATTTGGGTTGGTGGCGGGCGGACGGCCCCATGCC
 140 150 160 170 180 190 200
 CTTCCCTGGGCAGGGCTGCGCGCGTGTGCCGCCGCTGGCAGGAGGCCGCTCCCAACCCGCCCTGGCA
 210 220 230 240 250 260 270
 CACCGTGACCCCTGCGTCCCCGCTGGTGGCGGCTGCCAAGGGCGGGTCAAGGCAGAGAAGCT
 280 290 300 310 320 330 340
 CCTTGCTTCCCTGGAGTGGCTTATGCCCAATGGTTACAGCTCCAGAGGCTGACCTCATCCACTG
 350 360 370 380 390 400 410
 GAAGTCTCAGGTACACCCCGTGTGAAGCTGGTAGGTGAGTGCTGCTCGGCTCACTTCCCTCAAGCT
 420 430 440 450 460 470 480
 CTCCGGCTGCCACGGTGTGACTGCTGACGCTCTGGTCATGCTAGCCAAAGCCTGCTGCCAGCTCCATAG
 490 500 510 520 530 540 550
 CCTGGACCTACAGCACTCCATGGTGGAGTCCACAGCTGGTAGCTTGGAGGGCAGGGTCCG
 560 570 580 590 600 610 620
 AATGCGCAAGTTGGCTGACCTACAGCTCCCAGACGACGCCATCCTGGCGCATTGCTGGCAGCTG
 630 640 650 660 670 680 690
 CTGCCCCCAGCTCCAGGTCTGGAGGTGAGCACCGGATCAACCGTAATAGCATTCCCTCAGCTGCC
 700 710 720 730 740 750
 TGTCGAGGCTCTGAGAAAGGCTGCCCTCAGCTCCAGGTGCTGCCGCTGGTGAACCTGATGTGGCTGCC
 760 770 780 790 800 810 820
 CAAGCCTCCGGACGAGGGTGGCTCCGGACCAGGCTCCCTAGCCTAGAGGAGCTCTGCCGAG
 830 840 850
 CTCACCTGCAACTTGTGAGC

FIG. 23B

10	20	30	40	50	60
QHCSQKDTAELLRGLSLWNHAEERQKFFKYSVDEKSDKEAEVSEHSTGITHLPPEVMSI					
70	80	90	100	110	120
FSYLNQPQELCRCSQVSMKWSQLTKTGSLWKLYPVHWARGDWYSGPATELDTEPDDEWVK					
130	140	150	160	170	180
NRKDESRAFHEWDEDADIDESEESAEESIAISIAQMEKRLLHGLIHNVLPYVGTSVKTLV					
190	200	210	220	230	240
LAYSSAVSSKMVRQILELCPNLEHLDLTQTDISDSAFDSWSWLGCCQSLRHLDLSGCEKI					
250	260	270	280	290	300
TDVALEKISRALKILTSHQSGFLKTSTSKitSTAWKNKDITMQSTKQYACLHDLTNKGIG					
310	320	330	340	350	360
EEIDNEHPWTKPVSSENFTSPYVWMLDAEDLADIEDTVEWRHRNVESLCVMETASNFSCS					
370	380	390	400	410	420
TSGCFSKDIVGLRTSVCWQQHCASPAFAYCGHSFCCTGTALRTMSSLPESSAMCRKAART					
430	440	450	460	470	480
RLPRGKDLYFGSEKSDQETGRVLLFLSLSGCYQITDHGLRVLTLGGGLPYLEHNLNSGC					
490	500	510	520	530	540
LTITGAGLQDLVSACPSLNDEYFYCDNINGPHADTASGCQNLQCGFRACCRSGE*PLTS					
550	560	570	580	590	
DLCLLHLAEQAFFHALYS*HISCVNHPFLSVTCFGPIXYNFRNLNYQXIVML					

FIG. 24A

10 20 30 40 50 60 70 80 90
 ACAACACTGCTCTCAGAAGGATACTCCAGAACTCCTAGAGGTCTTACGCCATGGAACTGCTGAAGAGGGACAGAARTTTTAATTATTCC
 100 110 120 130 140 150 160 170 180
 GTGAGTAAAAGTCAGATAAAAGAAGCAGAAGTGTAGAACAACCTCCACAGGTATAACCCATCTTCCCTCAGCTGAGCTAATCTCTCAATTTCAGCT
 190 200 210 220 230 240 250 260 270 280
 ATCTTAATCCTCAAGAGTTATGCGATGCAGTCAGTAACCATGAAATGGCTCAGCTGACAAAAACGGGATGGCTTGGAAACATCTTACCC
 290 300 310 320 330 340 350 360 370
 TCTTCATTGGGCCAGAGGTGAGCTGCTATAGTGGTCCCGCACTGAACCTGATGATGAACTGATGATGAAATGGGTGAAAAATAGGAAAGATGAA
 380 390 400 410 420 430 440 450 460 470
 AGTGGTCTTTTCATGAGTGGATGAAGATCCTGACATTGATGAATCTGAAGAGTCTGGGGAGGAATCAATTGCTATCAGCATTGCCACAAATGG
 480 490 500 510 520 530 540 550 560
 AAAAACGTTTACTCCATGGCTTAATTACATAACGTTCTACCATATGTTGGTACTTCGTAAACCTTACTTGTACAGCTCTCCAGTTTC
 570 580 590 600 610 620 630 640 650
 CACCAAAATCGTTACCCAGATTAGACCTTGTCTTAACCTGGAGCATCTGGATCTTACCCAGACTGACATTTGAGATTCTGCATTGACAGT
 660 670 680 690 700 710 720 730 740 750
 TCGTCTTGGCTTGGTCTGCCAGAGTCTCCGGCATCTGATCTGCTGGTGTGAGAAAAATCACAGATGTCGCCCTAGAGAAGATTCCAGAG
 760 770 780 790 800 810 820 830 840
 CTCTTGGAAATTCTGACATCTCATCAAACGCTTTTGAAACATCTACAAACCAAAATTACTTCAACTCGTGGAAAAATAAGACATTACCAT
 850 860 870 880 890 900 910 920 930 940
 CGAGTCCACCAAGCAGTATCCCTGTTGCCACGATTTAACTAACAAAGGGATTGGAGAAGAAAATAGATAATGAAACACCCCTGGACTAACCTGTT
 950 960 970 980 990 1000 1010 1020 1030
 TCTCTGAGAATTTCACTTCTCTTATGTTGGATGTTAGATGCTGAAGATTGCTGATATTGAGATACTGTTGAATGGAGACATAGAAAATG
 1040 1050 1060 1070 1080 1090 1100 1110 1120
 TTGAAAGTCTTGTCTAAATGAAACAGCATCCAACCTTACTTGTGTTCCACCTCTGTTTGTAGTAAGGACATTGTTGGACTAACGGACTAGTG
 1130 1140 1150 1160 1170 1180 1190 1200 1210 1220
 CTGTTGGCACCAGCATTGCTCTCCAGCCTTGGTATGCGTCACTCATTTGTTGACAGAACACGCTTAAAGAACATGTCATCACTC
 1230 1240 1250 1260 1270 1280 1290 1300 1310
 CCAGAATCTCTGAAATGTTAGAAAAGCAGCAAGGACTAGATGCTAGGGAAAAGACTTAATTACTTGGCACTGAAACATCTGATCAAG
 1320 1330 1340 1350 1360 1370 1380 1390 1400 1410
 AGACTGGACCTGTAATTCTCTGTTCTCAGTTATGCGATGTTACAGATCACAGACCATGGTCTCAGGGTTTGACTCTGGGAGGAGGCCG
 1420 1430 1440 1450 1460 1470 1480 1490 1500
 TTATTTGGAGCACCTTAATCTCTGTTCTTACTATAACTGTTGCAAGGCCTCAGGGATTGCTGACGATGTCCTTCTGAATGATGAA
 1510 1520 1530 1540 1550 1560 1570 1580 1590
 TACTTTACTACTGTGACAACATTAACGGTCTCATGCTGATACGCCAGTGGATCCCAGAATTGCGAGTCTGGTTTGGAGCCCTGCTCCCGCT
 1600 1610 1620 1630 1640 1650 1660 1670 1680 1690
 CTGGCGAATGACCCCTGACTTCTGATCTTCTACTTCATTTAGCTGAGCAGGCTTCTTACACTCATAGCACATTCTCTGAATGATG
 1700 1710 1720 1730 1740 1750 1760 1770
 TAACCATCCCTTTGAGCGTCACTTGTGTTGGCCATTNYTACAACCTCAGAAATCTTAATTACCACTGATGTTAATGTTG

FIG. 24B

10	20	30	40	50	60
RVTSGCGLARGSSAMVFSNNDEGLINKKLPKELLRLIFSFLDIVTLRCRAQISKAWNILA					
70	80	90	100	110	120
LDGSNWQRIDLNFQIDVEGRVVENISKRCVGFLRKLSLRGCIGVGDSSLKTFAQNCRNI					
130	140	150	160	170	180
EHLNLNGCTKITDSTCYSLSRFCSKLKHLXLTSCVSITNSSLKGISEGCRNLEYLNLSWC					
190	200	210	220	230	240
DQITKDGIEALVRGCRLKALLRGCTQLEDEALKHIQNYCHELVSLNLQSCSRITDEGV					
250	260	270	280	290	300
VQICRGCHRLQALCLSGCSNLTDASLTALGLNCPRLQILEAARCSHLDAGFTLLARNCH					
310	320	330	340	350	360
ELEKMDLEXCILITDSTLIQLSIHCPKLQALSLSHCELIXDDGILHLSNSTCGHERLRLV					
370	380	390	400	410	420
ELDNCLLITDVALXHLENCRGLERLELYDCQQVTRAGIKRMRAQLPHVKVHAYFAPVTPP					
430	440	450	460	470	480
TAVAGSGQRLCRCCVIL*QQLPGPKG**GILSSRRPESS*PTPPSPNLILHWERHLQFP					
490	500	510	520	530	540
NRHLSRFKNGEDKKGFISNI*HHIVT*NMALT*LVLLLPSSLMSSLTSTHLLL*YL*RLI					
550					
ILKTDQTGPASKYINCVQ*					

FIG. 25A

10 20 30 40 50 60 70 80 90
 TTTTACTGTACACAGTTGATGCTATTTGATGCTGGGCCCTGCTCTGGCTTGAGGATTATAACCTTTAGAGGTATCAGAGAAGCAAATGGG
 100 110 120 130 140 150 160 170 180
 TACTGGTGAGGCTGCTCATTAGGGAAAGAGGGCAAAGGAGCACTAGCTAGGTCAGAGCCATGTTCAAGGTACAAATGTATGTCAGATGTTGCT
 190 200 210 220 230 240 250 260 270 280
 TATAAAATCCCTTCTTGTCTTGGCATTCTAAATCTTGATAGGTGCTGTTGGAAACTGTAAATGCCCTTCCCAATGGAGAATCAACAGATTG
 290 300 310 320 330 340 350 360 370
 GGTGATGGTGGAGTCGGTCAGGAAGACTCAGGTCTTAGAGGAAGGGATGCTCATCACCCCTTNGGCCAGGGCAGCTGCTGTCAGAGAATGA
 380 390 400 410 420 430 440 450 460 470
 CACACCACTGCACAGTCGCTGTCACACTTCTGCCACTGCTGCTGGTGGGGTGACGGGAGCAAAGTAGGGCTGGACTTTGACATCAGGGAGCTG
 480 490 500 510 520 530 540 550 560
 AGCCCCGATCCGCTTGTGATGCTCAGGGTAACCTGCTGGCAGTCGTCAGCTCGAGGGCGCTCCAGGGCTCGGCCAGTCTCTAGGGTGTCCAGG
 570 580 590 600 610 620 630 640 650
 CCCACATCAGTCAGTGGAGGGCAGTTGTCACACTCCAGTACCCAGCCCTCTCATGGCCACAGGTACTGTTGTCAGGTGCAGGATCCCACATCAT
 660 670 680 690 700 710 720 730 740 750
 CTGKGATGAGTTACAGTGGACAGGCTCAGGGCTTGCAGTTAGGACAGTGAATGGAGAGCTGGATGAGTGTGCTGCGTTACAGGATGCA
 760 770 780 790 800 810 820 830 840
 WTCTTCAGATCCATCTCTCAATTCTGTCAGTAAAGTGTAAAACCTGCGTCAGTCAAATGGAGCATGGGAGCTGGCTCCAAA
 850 860 870 880 890 900 910 920 930 940
 ATTTGCAGTCGGGAGACAGTTCAAAACCCAGGGCTGTAAGAGAGGGCATCTGTGAGGTTGCTGCAACCCGAAAGGAGAGGAGGCTGTAGCCGGTCA
 950 960 970 980 990 1000 1010 1020 1030
 AGCCCCCTGCAATCTGACCCACACCTCATCCGTATACGTCAGCAGGACTGCAAGTTGAGGCTACAAAGCTCATGGCAGTAATTCTGAATGTG
 1040 1050 1060 1070 1080 1090 1100 1110 1120
 TTTCAGAGCTTCATCTCTAACTGTGTCAGGCCCCCTCAGGACCAGGGCTTCAGGCCCTCGACAAACCTCCGACCAAGTGCCTCGATGCCATCCTTC
 1130 1140 1150 1160 1170 1180 1190 1200 1210 1220
 CTGATCTGATCACACCAAGAGAGGTTAGTACTCAGGTTCCGGCAGGCCCTCACTGATCCCTTCAAGGAGCTCTTGTAAATAGACACACAG
 1230 1240 1250 1260 1270 1280 1290 1300 1310
 ACAGTCAGAAGCCAGATGTTAGCTTGGAAACAGAACTGCTAAGGCTATAACACGGTGTGTCAGTGAATTGTCATCCATTGAGGTTCAAAAG
 1320 1330 1340 1350 1360 1370 1380 1390 1400 1410
 TTCAATGTTTCGGCAGTTCTGTGCAAGGTCTTCAAGGAGGAATCCCAACACCAATGCCAGGCCCTCCAAAGCTGAGCTTCCCTCAGGAATCCAA
 1420 1430 1440 1450 1460 1470 1480 1490 1500
 CATCGCTTCGGAGATATTTCCACCACTGCGACCCCTACATCTATTGAAAGTAAATCTTGTGCAAGTGTGCTTCCATCCAGGGCTA
 1510 1520 1530 1540 1550 1560 1570 1580 1590
 AGATGTTCCAAGGCTTGGAAATCTGTGACATGCCACAAAGTTACTATATCCAAGAAGGAAATATTCTTAACAGAAGTTCTTGGGTAACCTT
 1600 1610 1620 1630 1640 1650 1660 1670 1680
 TTGTTAATAAGGCCATTGATCATTTGAGAAAACATGGCGAAGAGCCGCGAGCGAGCCACAGCGCGAAGTCACACGGC

FIG. 25B

10	20	30	40	50	60
MSPVFPMLTVLTMFYIICLRRARTATRGEMMNTHRAIESNSQTSPLNAAEVVQYAKEVVD					
70	80	90	100	110	120
FSSHYGSENSMSYTMWNLAGVPNVFPSSGDFQTAVFRITYGTWWDQCPSASLPFKRTPPN					
130	140	150	160	170	180
FQSQDÝVELTFEQQVYPTAVHVLETÝHPGAVIRILACSANPYPSPNPPAEVRWEILWSERP					
190	200	210	220	230	240
TKVNASQARQFKPCIKQINFPTNLIRLEVNSSLLEYYTTELDAVVLHGVKDKPVLSLKTS					
250	260	270	280	290	300
IDMNDIEDDAYAEKDGCMDSLNKKFSSAVLGEGPNNNGYFDKLPYELIQLILNHHTLPDL					
310	320	330	340	350	360
CRLAQTCKLLSQHCCDPLQYIHLNLQPYWAKLDDTSLEFLQSRCTLVQWLNLSWTGNRGF					
370	380	390	400	410	420
ISVAGFSRFLKVCGSELVRLELSCSHFLNETCLEVISEMCPNLQALNLSSCDKLPPQAFN					
430	440	450	460	470	480
HIAKLCSSLKRLVLYRTKVEQTALLSILNFCSELQHLSLGSCVMIEDYDVIASMIGAKCKK					
490	500	510	520	530	540
LRTLDLWRCKNITENGIAELASGCPLLEELDLGWCPTLQSSTGCFTRLAHQLPNLQKLFL					
550	560	570	580	590	600
TANRSVCDTDIDEALACNCTRLQQLDILGTRMSPASLRKLLESCKDLSLLDVSFCSQIDN					
610	620				
RAVLELNASFPKVFIKKSFTQ					

FIG. 26A

10 20 30 40 50 60 70 80 90
 ATGTCACCGGTCTTCCCATGTTAACAGTTGACCATGTTATTATATGCTTCGGCGCCGAGGCAGGACAGCTACAAGAGGAGAAATGA
 100 110 120 130 140 150 160 170 180
 TCAACACCCATAGACCTATAAGAACAGCAGACTTCCCTCTCAATCAGAGGTAGTCCAGTATGCCAAGAAGTAGTGGATTCACTTC
 190 200 210 220 230 240 250 260 270 280
 CCATTATGGAAGTGAGAATAGTATGCTCTATACTATGCGAATTGGCTGGTACCAATGTATTCCAAGTCTGGTACTTACTCAGACA
 290 300 310 320 330 340 350 360 370
 GCTGTGTTGCAACTTATGGGACATGGTGGGATCAGTGTCTAGTGTCTTGGCAATCAAGAGGAGGCCACCTAATTTCAGACCCAGGACT
 380 390 400 410 420 430 440 450 460 470
 ATGTGGAACCTACTTTGAAACAACAGGTGTACCTACAGCTGTACATGTCTAGAAACCTATCATCCGGAGCAGTCATTAGAATTCTCGCTTG
 480 490 500 510 520 530 540 550 560
 TTCTGCAAAATCTTATTCCCAAAATCCACCAAGCTGAAGTAAGATGGAGATTCTTGGTCAAGAGACCTACGAAGGTGAATGCTCCCAAGCT
 570 580 590 600 610 620 630 640 650
 CCCAGTTAACCTGTATTAAGCAGATAATTCCCAAAATCTTACGACTGGAAGTAAATAGTTCTCTGGAAATTTACACTGAAT
 660 670 680 690 700 710 720 730 740 750
 TAGATGCACTTGTGCTACATGGTGTGAAGGACAAGCCAGTGTCTCTCAAGACTTCACTTATTGACATGAATGATAGAAGATGATGCCA
 760 770 780 790 800 810 820 830 840
 TCCAGAAAAGATGGTGTGGAATGGACAGCTTAACAAAAGTTAGCAGTGTCTCTGGGGAGGGAAATAATGGGTATTGTATAAA
 850 860 870 880 890 900 910 920 930 940
 CTACCTTATGAGCTTATTCACTGAGCTTGTGAATCATCTTACACTACCAGACCTGTGTAGATTAGCACAGACTTGCAAAACTACTGAGCCACCTT
 950 960 970 980 990 1000 1010 1020 1030
 CCTGTGATCCTCTGCAATACATCCACCTCAATCTGCAACCATACTGGCAAAACTAGATGACACTTCTGGAAATTCTACAGTCTCGCTGCCAC
 1040 1050 1060 1070 1080 1090 1100 1110 1120
 TCTTGTCCACTGGCTTAATTATCTGGACTGCCAATAGAGGCTTCATCTGTGGCAGGATTAGCAGGTTCTGAAGGTTTGTGGATCCGAA
 1130 1140 1150 1160 1170 1180 1190 1200 1210 1220
 TTAGTACCCCTGAAATTGTCTCCAGCCACTTTCTTAATGAAACTTGCTTAGAAGTTATTCTGAGATGTGCTAAATCTACAGGCCTTAAATC
 1230 1240 1250 1260 1270 1280 1290 1300 1310
 TCTCTCTGTGATAAGCTACCAACCTCAAGCTTCAACCACATTGCAAGTTATCCACCCCTAAACGACTTCTCTATCGAACAAAAGTAGA
 1320 1330 1340 1350 1360 1370 1380 1390 1400 1410
 GCAAAACAGCACTGCTCAGCATTGAACTTCTGTCAGACCTTCAGCACCTCAGTTAGCCAGTTGTGTCAATGARGACTATGATGTGATA
 1420 1430 1440 1450 1460 1470 1480 1490 1500
 GCTAGCATGATAGGAGCCAAGTGTAAAAAAACTCCGGACCCCTGGATCTGTGGAGATGTAAGAATATTACTGAGAATGGAAATAGCAGAACCTGGCTT
 1510 1520 1530 1540 1550 1560 1570 1580 1590
 CTGGGTGTOACTACTGGAGGAGCTGACCTTGGCTGGTCCCACACTCTGAGAGCAGCACCCGGTGTCTCACCAGACTGGCACACCAAGCTCCC
 1600 1610 1620 1630 1640 1650 1660 1670 1680 1690
 AAACCTGCAAAACTCTTCTACAGCTAACAGATCTGTGTGACACAGACATTGATGAATTGGCATGTAATTGTACCGGTTACACCGAGCTG
 1700 1710 1720 1730 1740 1750 1760 1770 1780
 GACATATTAGGAACAAGAACATGTAAGTCCGCATCTTAAGAAAACCTCTGAAATCTGTAAAGATCTTCTTACTTGATGTGTCTCTGTT
 1790 1800 1810 1820 1830 1840 1850 1860
 CGCAGATTGATAAACAGAGCTGTGCTAGAATGCAAGCTTCCAAAAGTGTCTATAAAAAGAGCTTACTCAGTGA

FIG. 26B

10	20	30	40	50	60
MQLVPDIEFKITYTRSPDGDGVGNSYIEDNDDDSKMA DLLSYFQQQLTFQESVLKLCQPE					
70	80	90	100	110	120
LESSQI HISVLPMEVLMYIFRWVVSSDLRLSLEQLSLVCRGFYICARDPEIWRLACLKV					
130	140	150	160	170	180
WGRSCI KLV PYTSWREMFLERPRVRFDGVYISKTTYIRQGEQSLDGFYRAWHQVEYYRYI					
190	200	210	220	230	240
RFFPDGHVMM LTTPEEPQSIVPRLRTRNRTDAILLGHYRLSQD TDNQTKVFAVITKKKE					
250	260	270	280	290	300
EKPLDYKYRYFRRVPVQEADQSFHVGLQLCSSGHQRFNKL IWIHHSCHITYKSTGETAVS					
310	320				
AFEIDKMYTPLFFARVRSYTAFSERPL					

FIG. 27A

10 20 30 40 50 60
 ATGCAACTTGTACCTGATATAGAGTTCAAGATTACTTATACCCGGTCTCCAGATGGTATGGCGTTGGA
 70 80 90 100 110 120 130
 AACAGCTACATTGAAGATAATGATGATGACAGCAAAATGGCAGATCTCTTGTCTACTTCCAGCAGCAA
 140 150 160 170 180 190 200
 CTCACATTCAGGAGTCTGTGCTAAACTGTGTCAGCCTGAGCTTGAGAGCAGTCAGATTACATATCA
 210 220 230 240 250 260 270
 GTGCTGCCAATGGAGGTCTGATGTACATCTCCGATGGGTGGTGTAGTGACTTGGACCTCAGATCA
 280 290 300 310 320 330 340
 TTGGAGCAGTTGTCGCTGGTGTGCAGAGGATTCTACATCTGTGCCAGAGACCCCTGAAATATGGCGTCTG
 350 360 370 380 390 400 410
 GCCTGCTTGAAGTTGGGGCAGAAGCTGTATTAAACTGTGTTCCGTACACGTCTGGAGAGAGATGTTT
 420 430 440 450 460 470 480
 TTAGAACGGCCTCGTTCGGTTGATGGCGTGTATACAGTAAACACATATATTCTGTCAGGGAA
 490 500 510 520 530 540 550
 CAGTCTCTTGATGGTTCTATAGAGCCTGGCACCAAGTGAATATTACAGGTACATAAGATTCTTCCT
 560 570 580 590 600 610 620
 GATGGCCATGTGATGATGTTGACAACCCCTGAAGAGCCTCAGTCCATTGTTCCACGTTAAGAACTAGG
 630 640 650 660 670 680 690
 AATAACCAGGACTGATGCAATTCTACTGGGTCACTATCGCTTGTACAAGACACAGACAATCAGACAAA
 700 710 720 730 740 750
 GTATTTGCTGTAAATAACTAAGAAAAAAGAAGAAAAACCACTTGACTATAAATACAGATATTCGTCGT
 760 770 780 790 800 810 820
 GTCCCTGTACAAGAACGAGATCAGAGTTTCATGTGGGGCTACAGCTATGTTCCAGTGGTCACCAGAGG
 830 840 850 860 870 880 890
 TTCAACAAACTCATCTGGATACATCATTCTTGTACATTACTTACAAATCAACTGGTGAGACTGCAGTC
 900 910 920 930 940 950 960
 AGTGCTTTGAGATTGACAAGATGTACACCCCTTGTCTCGCCAGAGTAAGGAGCTACACAGCTTC
 970 980
 TCAGAAAGGCCTCTGTAG

FIG. 27B

10 20 30 40 50 60
AALDPDLENDFFVRKTGAFHANPYVLRAFEDFRKFSEQDDSVERDIILQCREGELVLPD

70 80 90 100 110 120
LEKDDMIVRRIPQAQKKEVPLSGAPDRYHPVPFPEPWTLPPPEIQAQFLCVLERTCPSKEKS

130 140 150 160 170 180
NSCRILVPSYRQKKDDMLTRKIQSWKLGTTVPPISFTPGLCSEADLKRWEAIREASRLRH

190 200 210 220 230 240
KKRLMVERLFQKIYGENGSKMSDVSaedVQNLRQLRYEEMQKIKSQLKEQDQKWQDDLA

250
KWKDRRKSYTSDLQK

FIG. 28A

10 20 30 40 50 60
 GCAGCCCTGGATCCTGACTTAGAGAATGATGATTCCTTCAGAAAGACTGGGGCTTCATGCAAAT
 70 80 90 100 110 120 130
 CCATATGTTCTCCGAGCTTGAAGACTTAGAAAGTTCTCTGAGCAAGATGATTCTGTAGAGCGAGAT
 140 150 160 170 180 190 200
 ATAATTTACAGTGTAGAGAAGGTGAACCTGTA~~CT~~CCGGATTTGGAAAAAGATGATATGATTGTCGC
 210 220 230 240 250 260 270
 CGAATCCCAGCACAGAAGAAGAAGTGCCTGCTGGGGCCCCAGATAGATACCACCCAGTCCCTTT
 280 290 300 310 320 330 340
 CCCGAACCCCTGGACTCTCCCTCCAGAAATTCAAGCAAATTCTCTGTACTTGAAAGGACATGCCA
 350 360 370 380 390 400 410
 TCCAAAGAAAAAGTAATAGCTGTAGAATATTAGTTCCTTCATATCGCAGAAGAAAGATGACATGCTG
 420 430 440 450 460 470 480
 ACACGTAAGATTCACTGGAAACTGGAAACTACCGTGCCTCCCATCAGTTCACNCCTGGCCCTGC
 490 500 510 520 530 540 550
 AGTGAGGCTGACTTGAAGAGATGGGAGGCCATCCGGAGGCCAGCAGACTCAGGCACAAGAAAAGGCTG
 560 570 580 590 600 610 620
 ATGGTGGAGAGACTCTTCAAAAGATTATGGTGAGAATGGGAGTAAGTCATGAGTGTAGCGA
 630 640 650 660 670 680 690
 GAAGATGTTCAAAACTTGCCTCAGCTGCCTACGAGGAGATGCAGAAAATAAAATCACAAATTAAAAGAA
 700 710 720 730 740 750
 CAAGATCAGAAATGGCAGGATGACCTTGCAAAATGGAAAGATCGTCGAAAAGTTACACTTCAGATCTG
 760
 CAGAAG

FIG. 28B

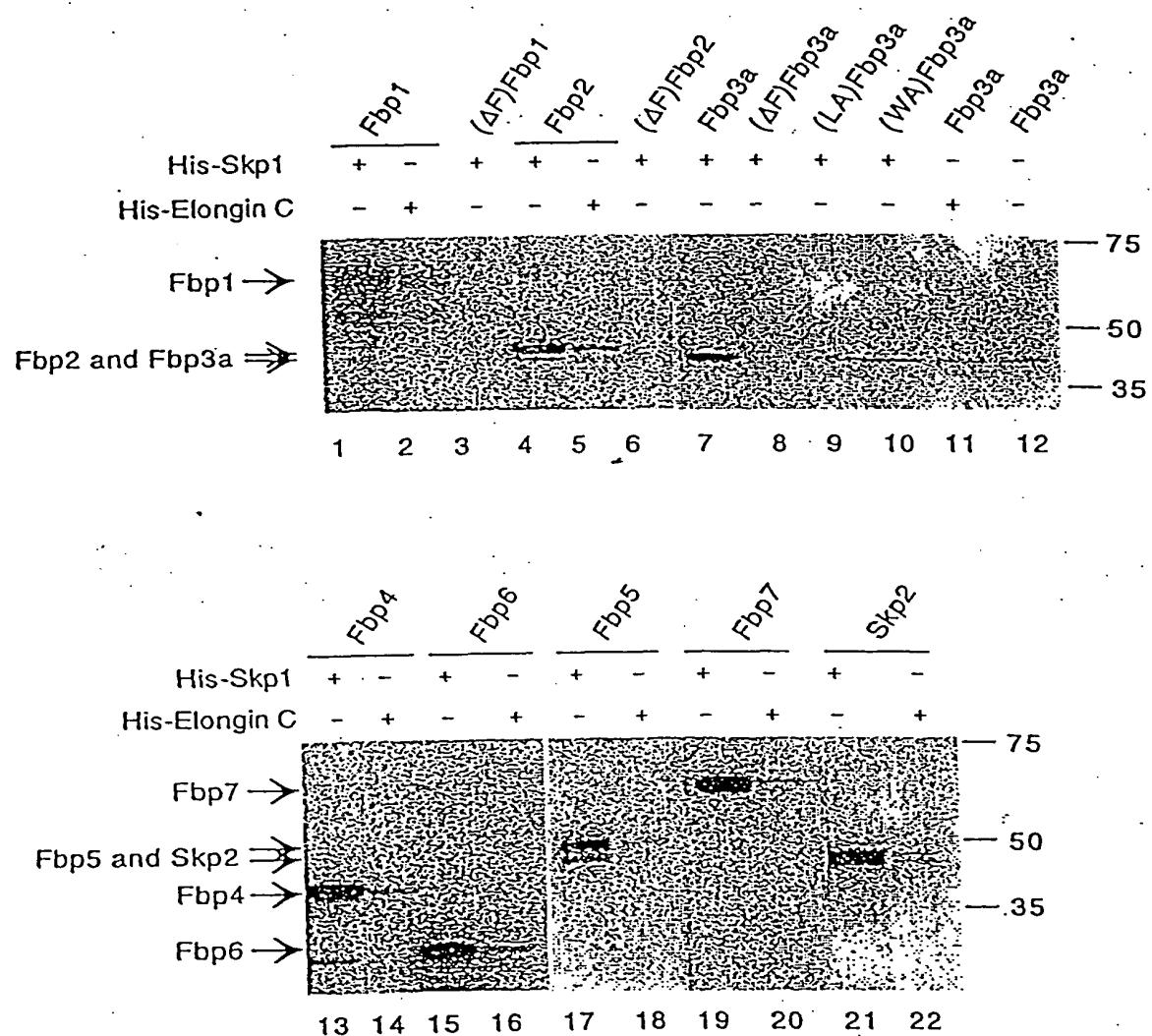


FIG. 29

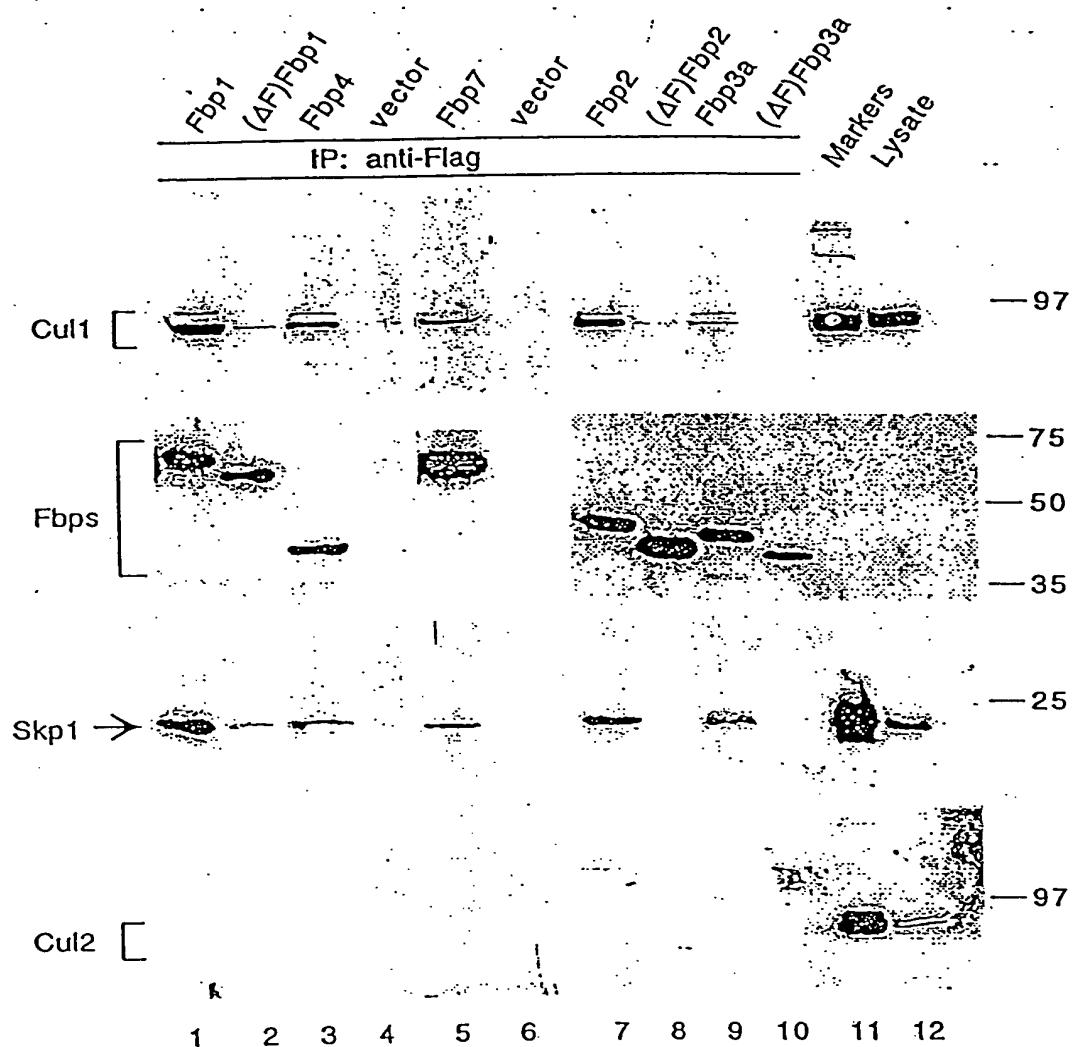


FIG. 30

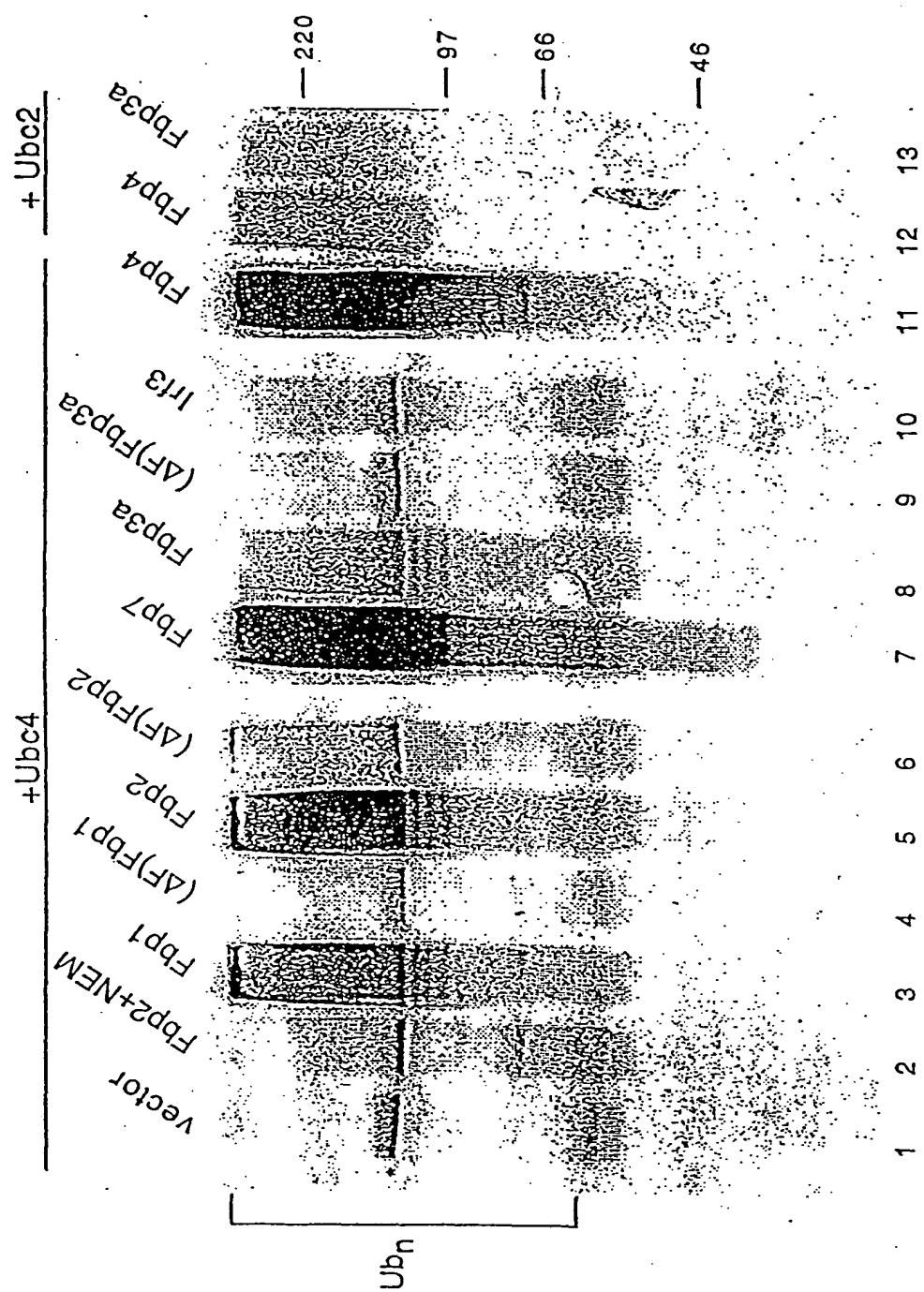


FIG. 31

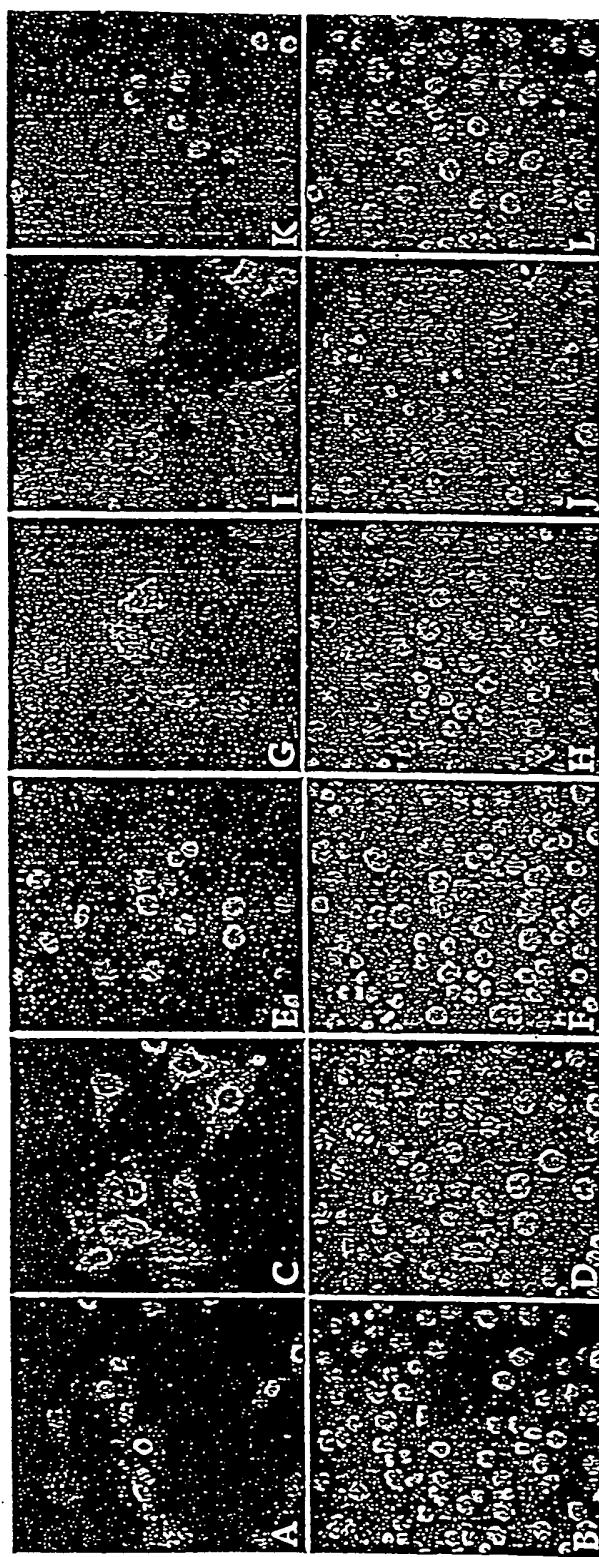


FIG. 32

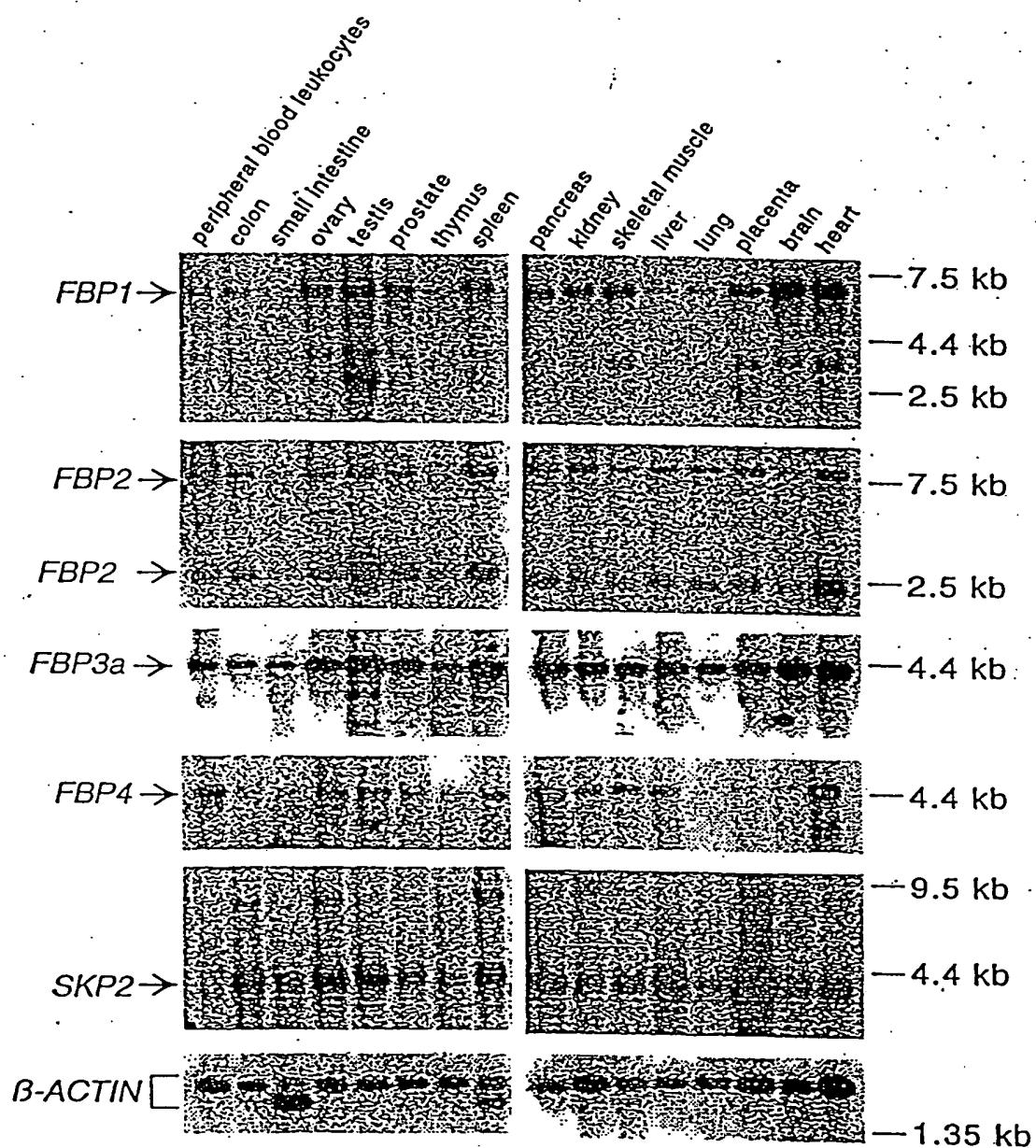


FIG. 33

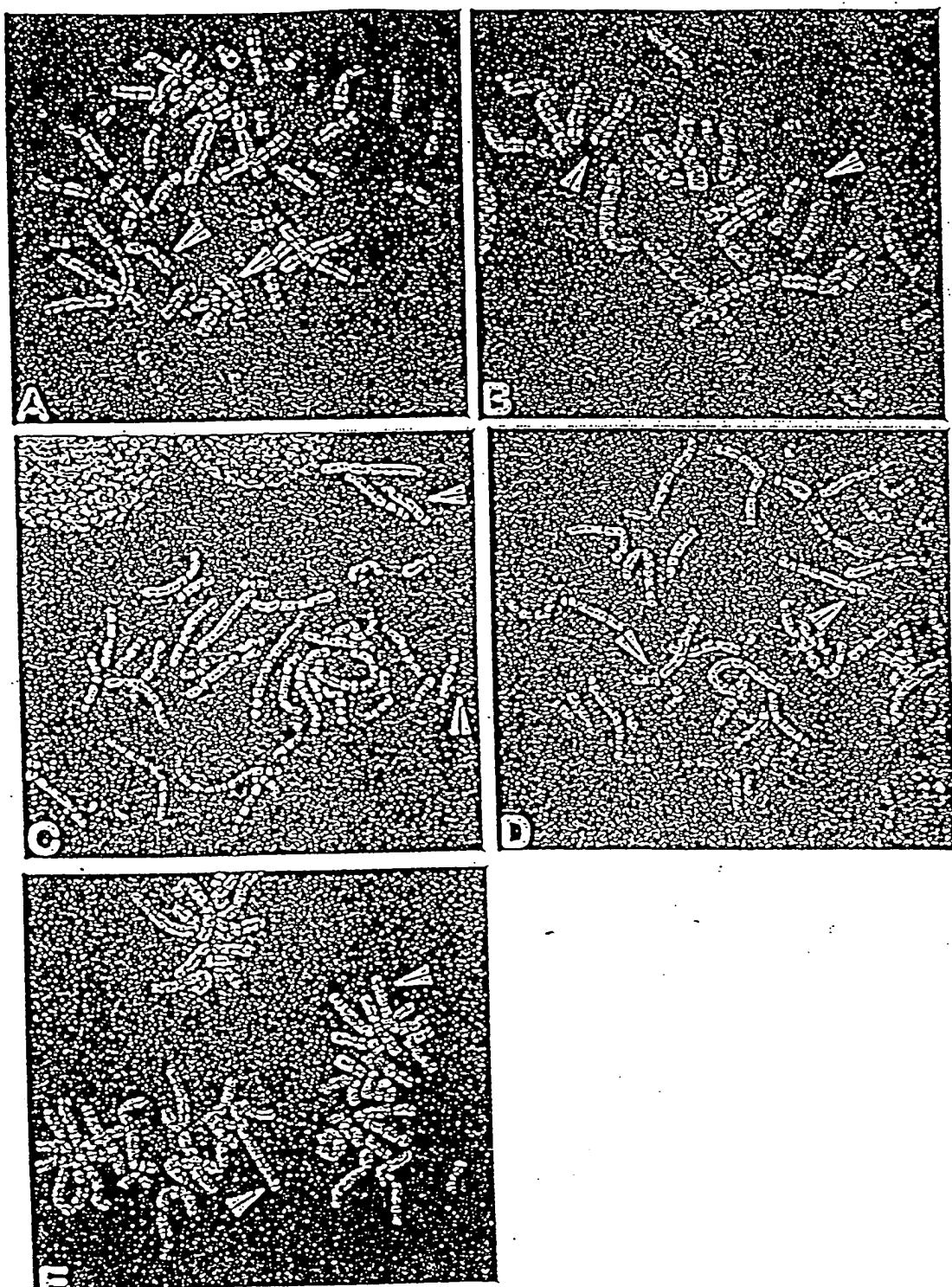


FIG. 34 A-E

5914-099

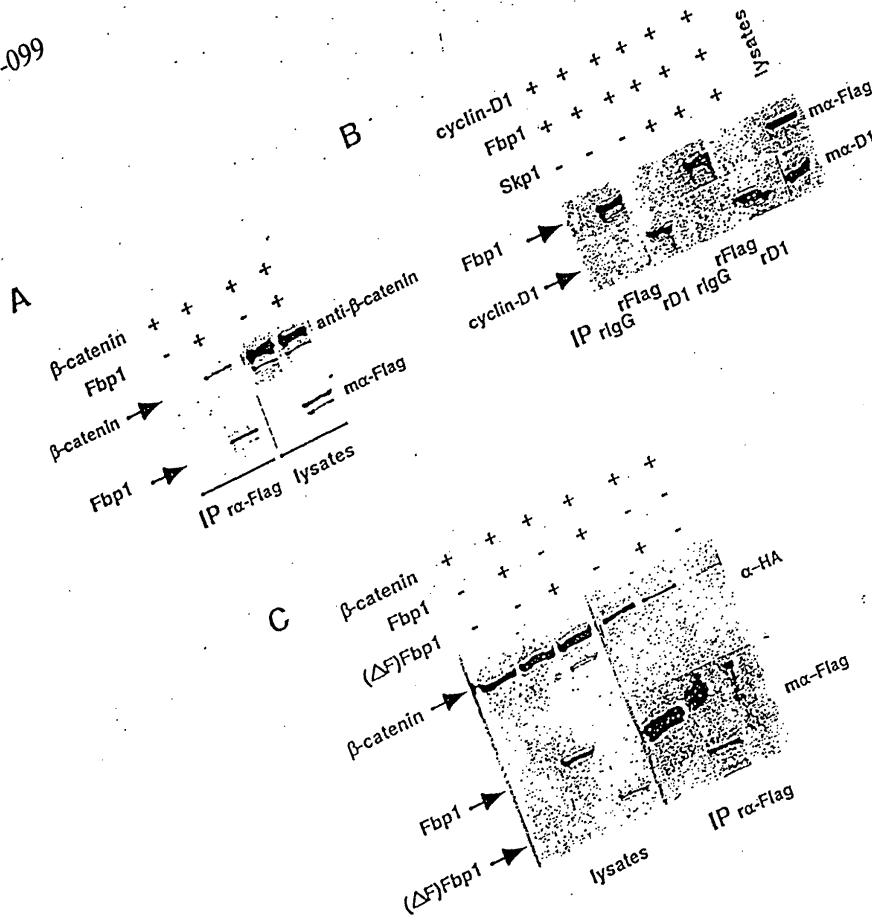


FIG. 35 A-C

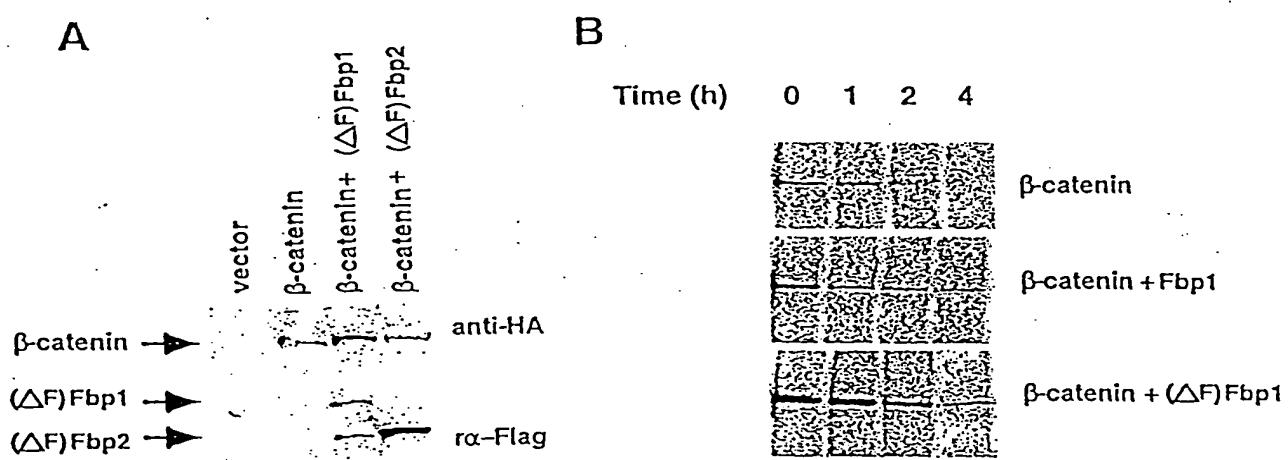


FIG. 36 A-B

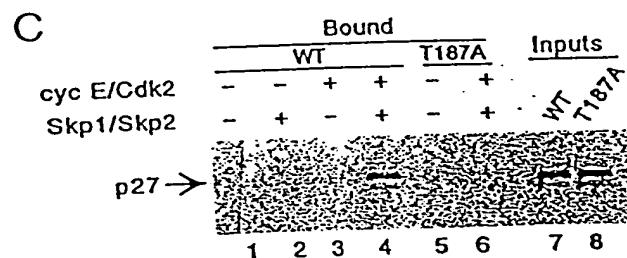
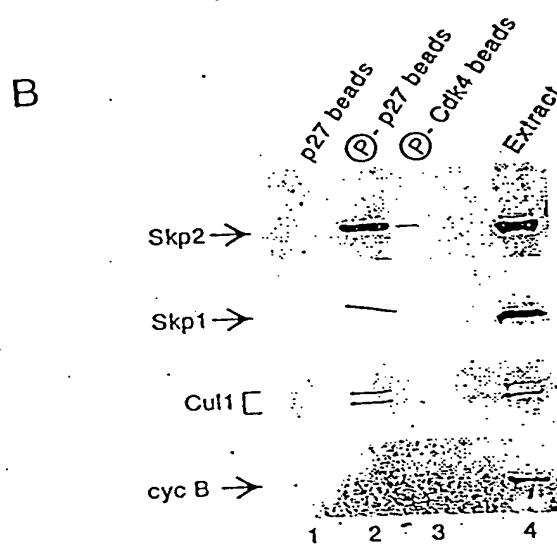
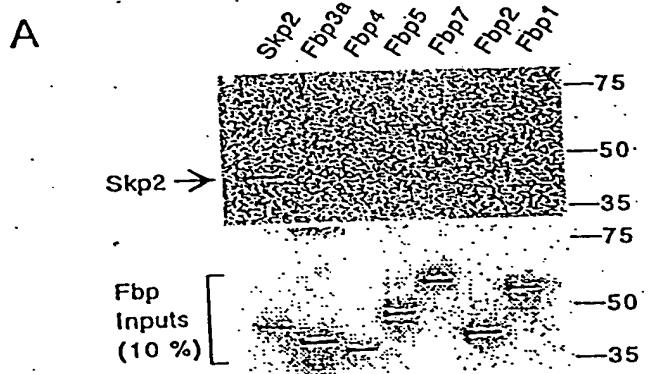


FIG. 37 A-C

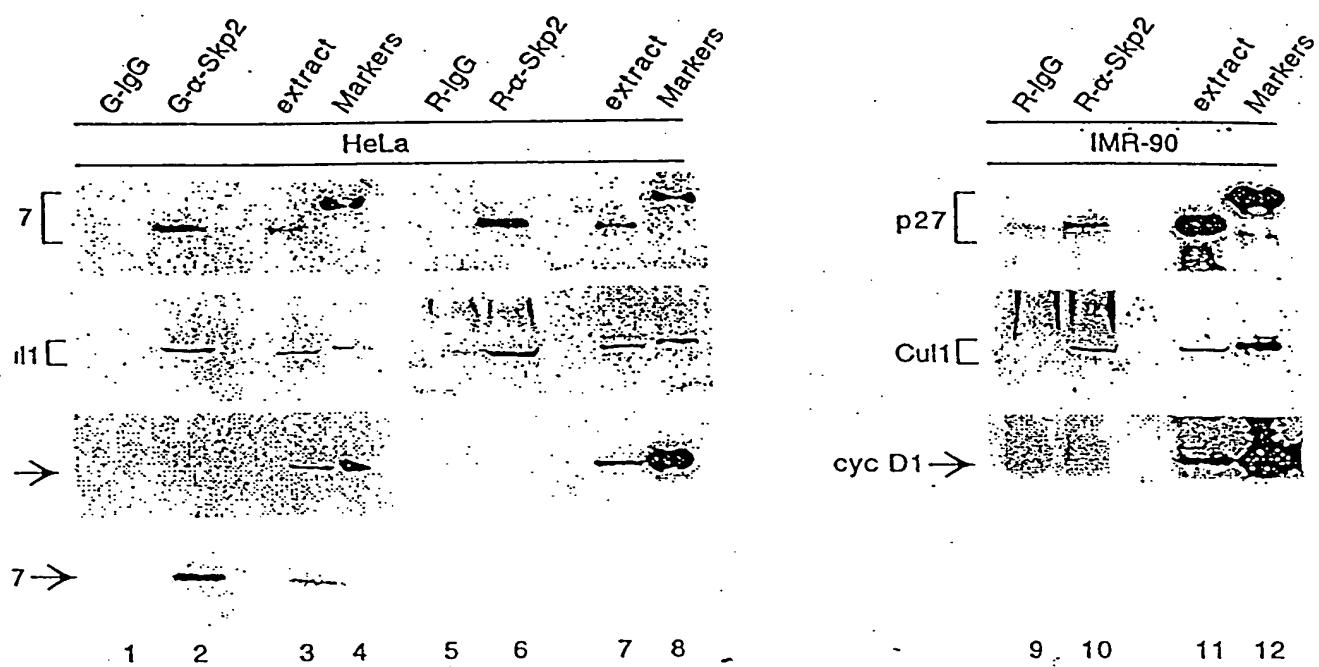


FIG. 38

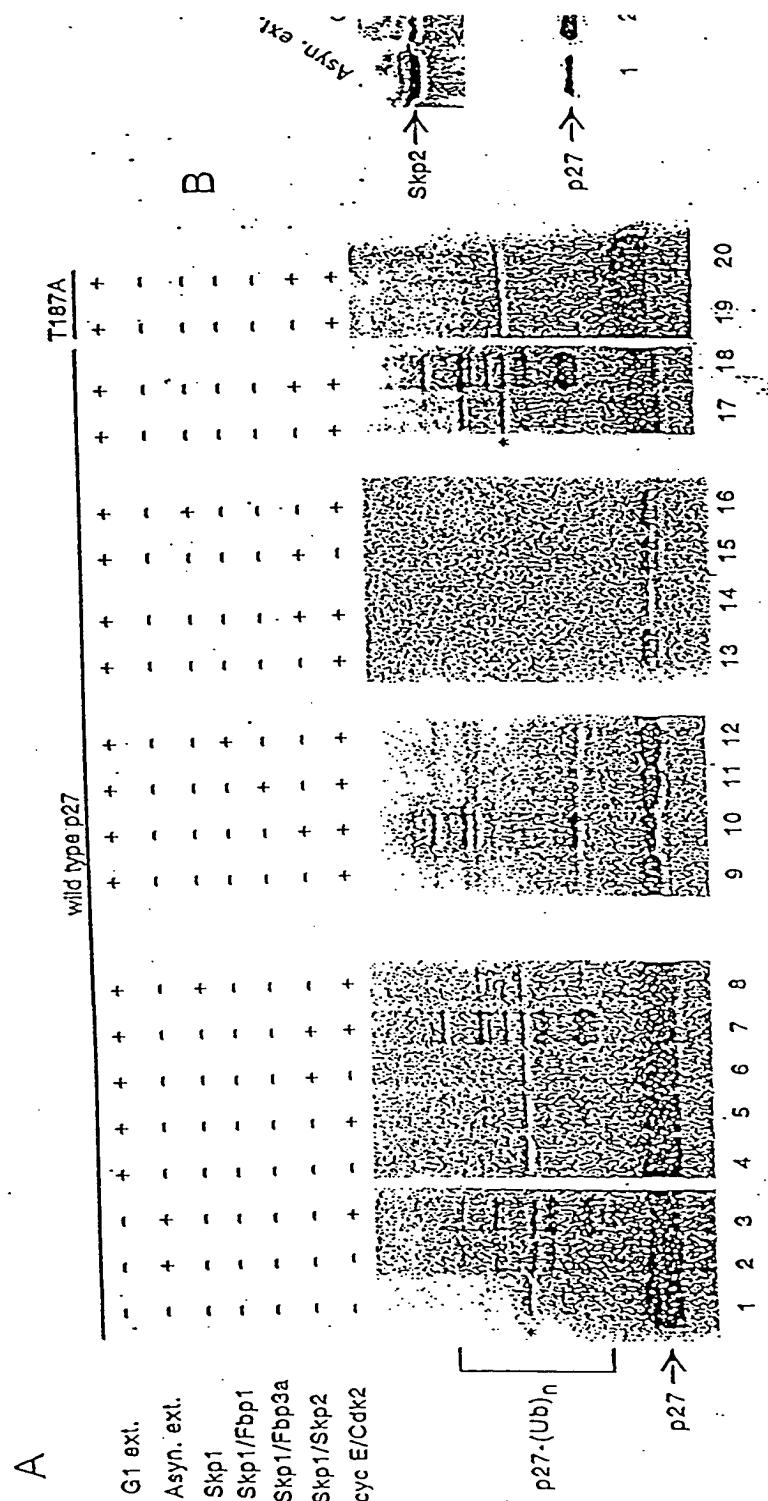


FIG. 39 A-B

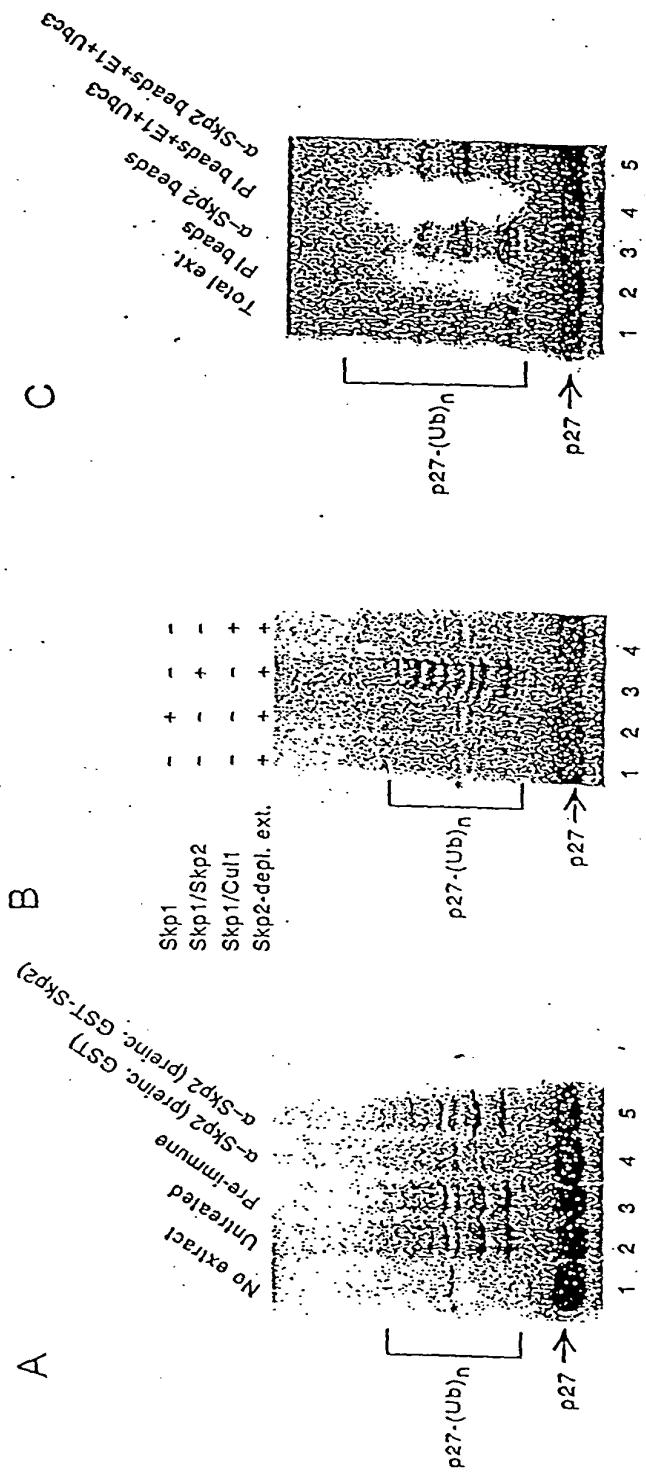
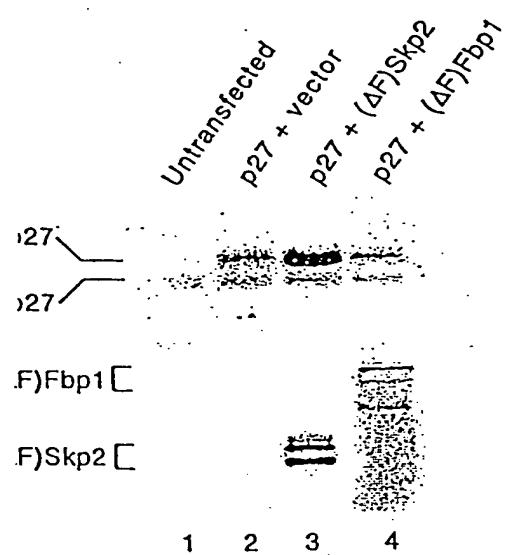


FIG. 40 A-C



B

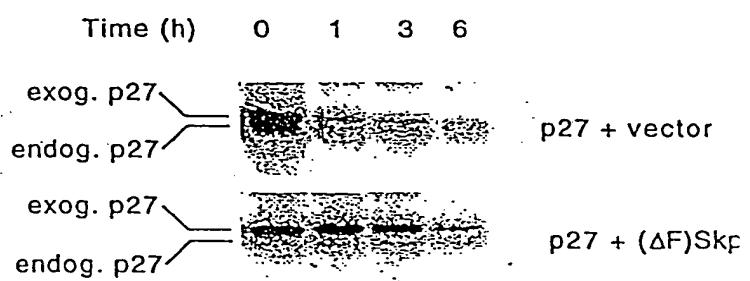


FIG. 41 A-B

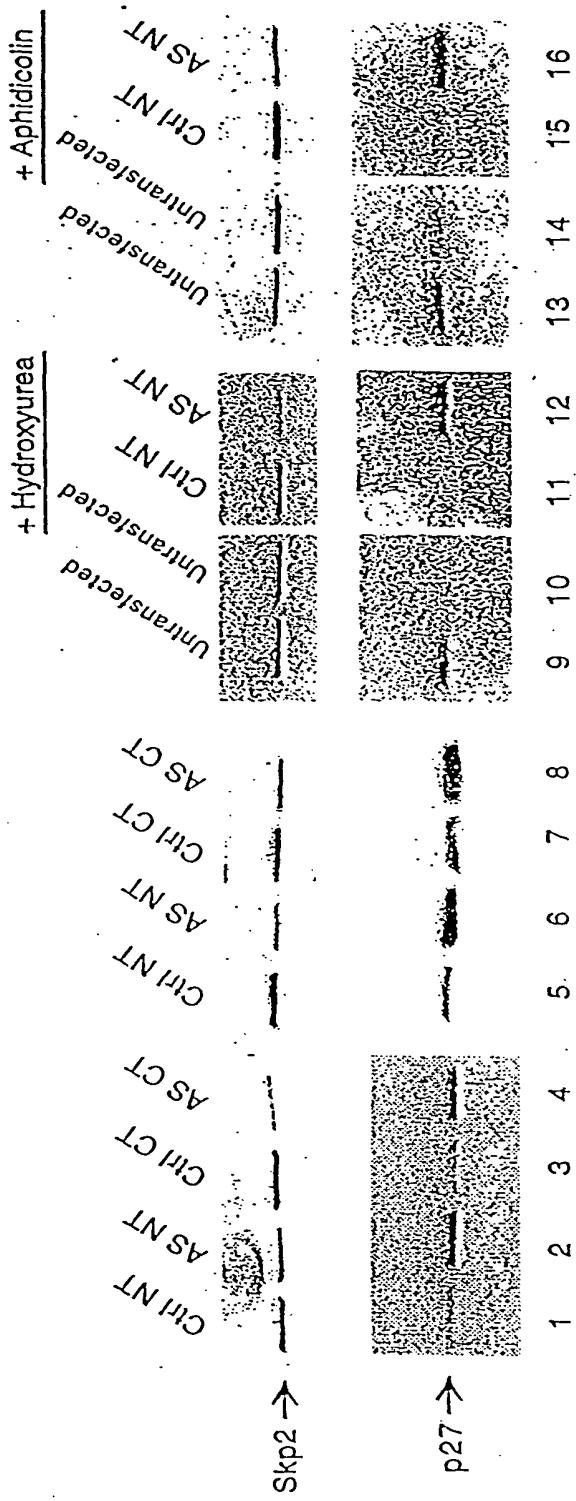
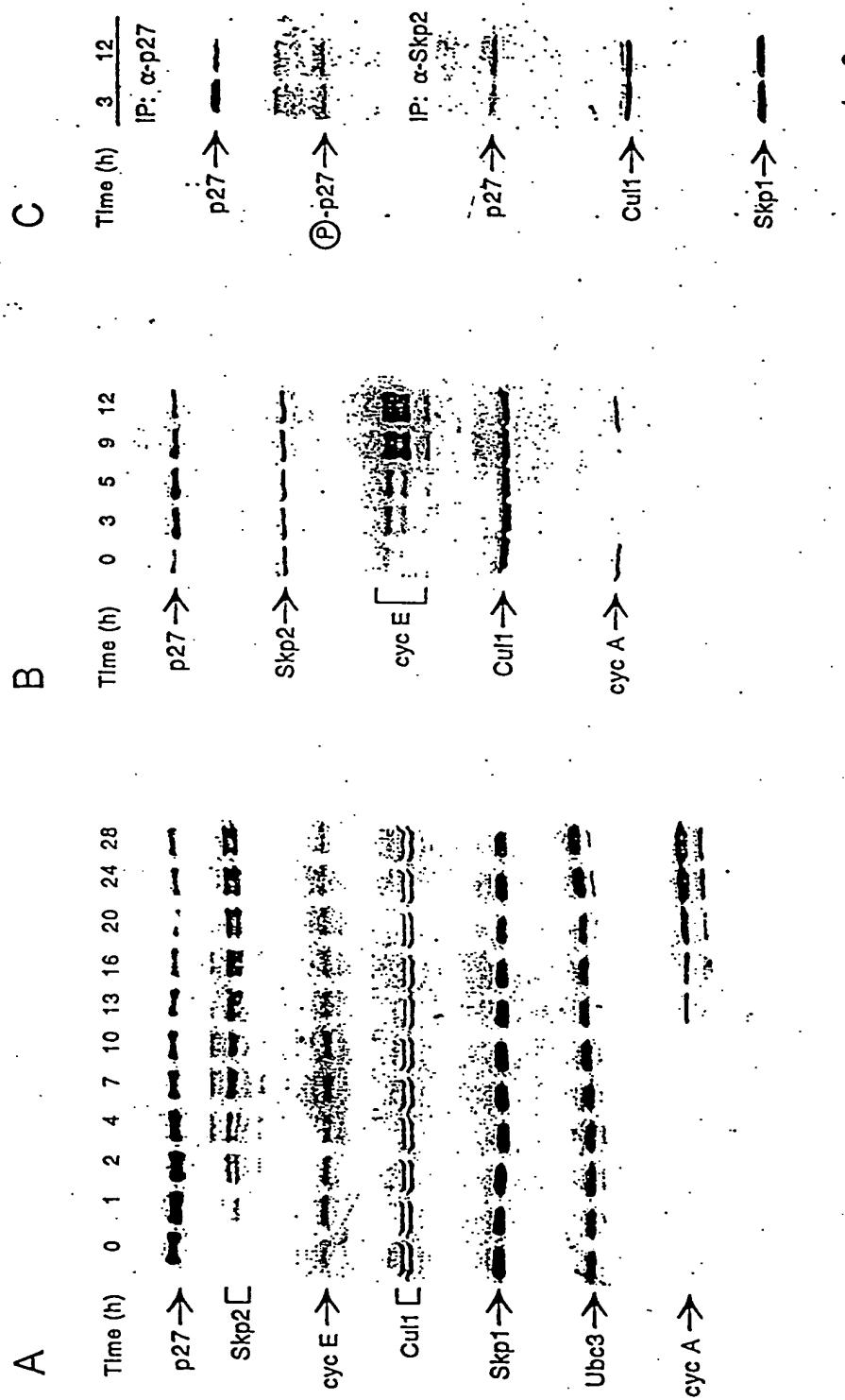


FIG. 42



1 2

FIG. 43 A-C

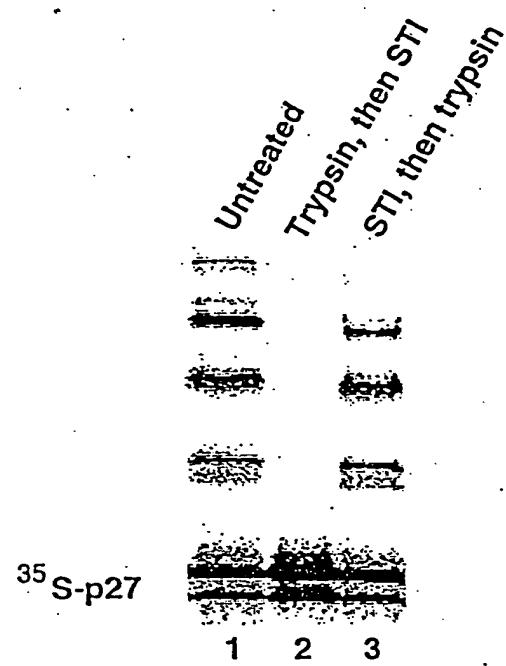
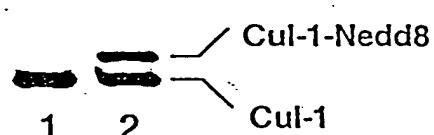
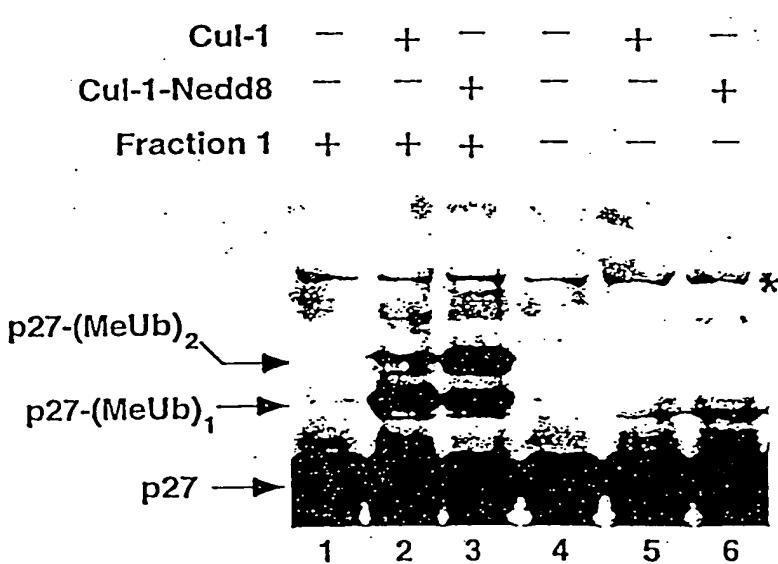
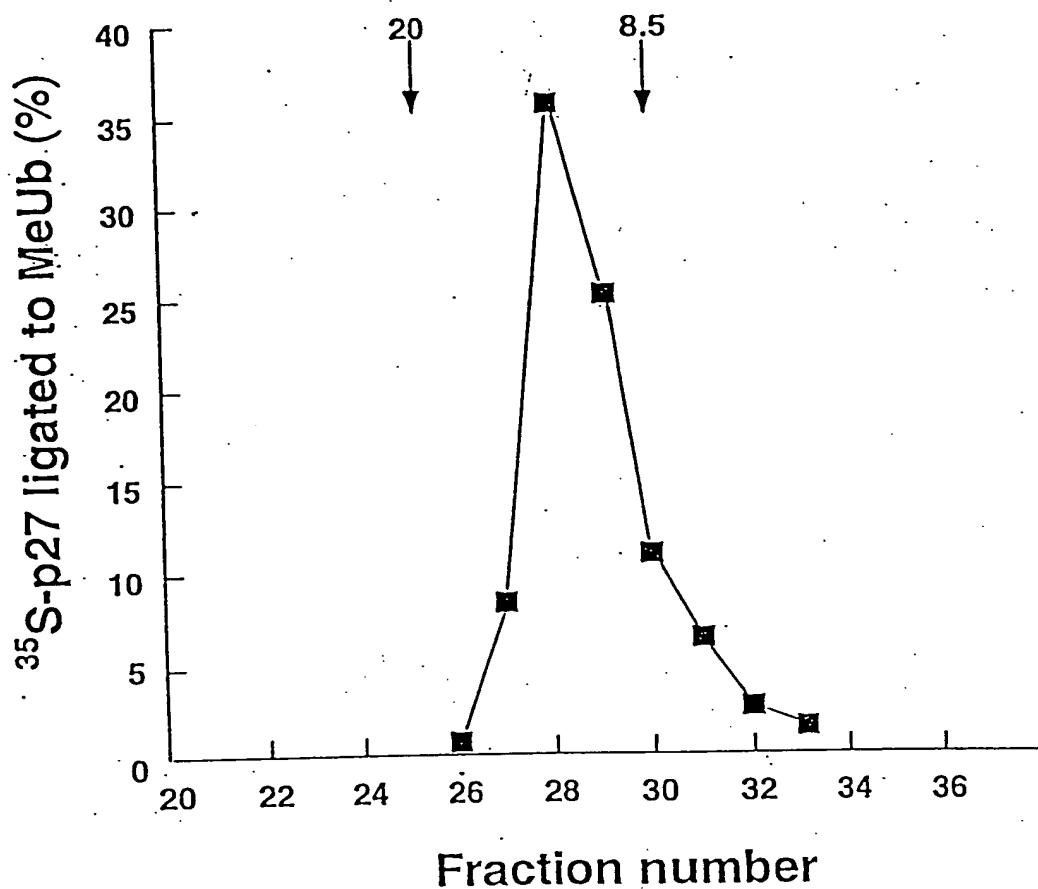


FIG. 44

A**B****C****FIG. 45**

A.



B.

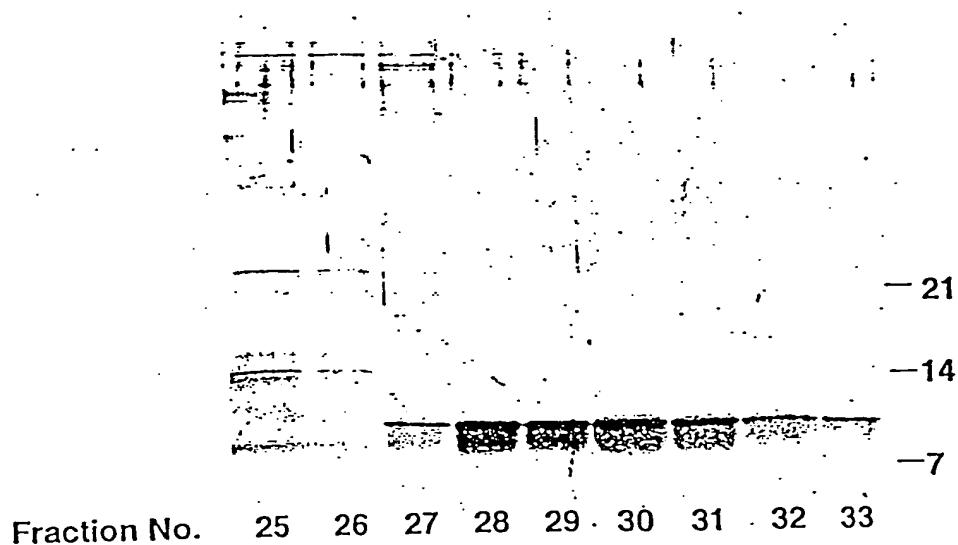


FIG. 46

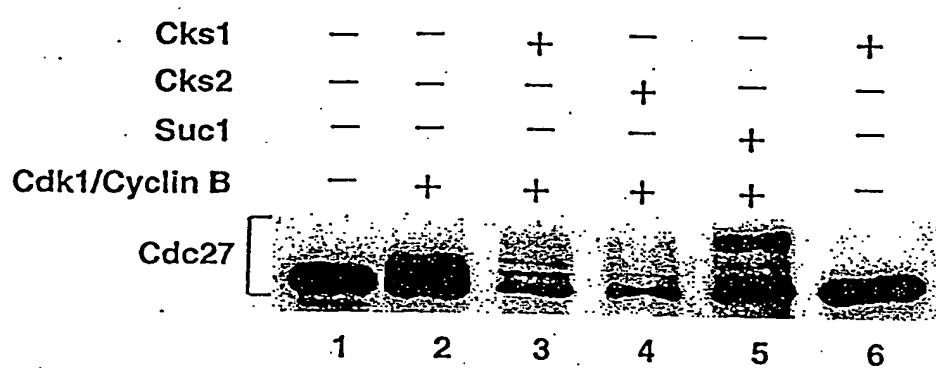


FIG. 47

A**FIG. 48**

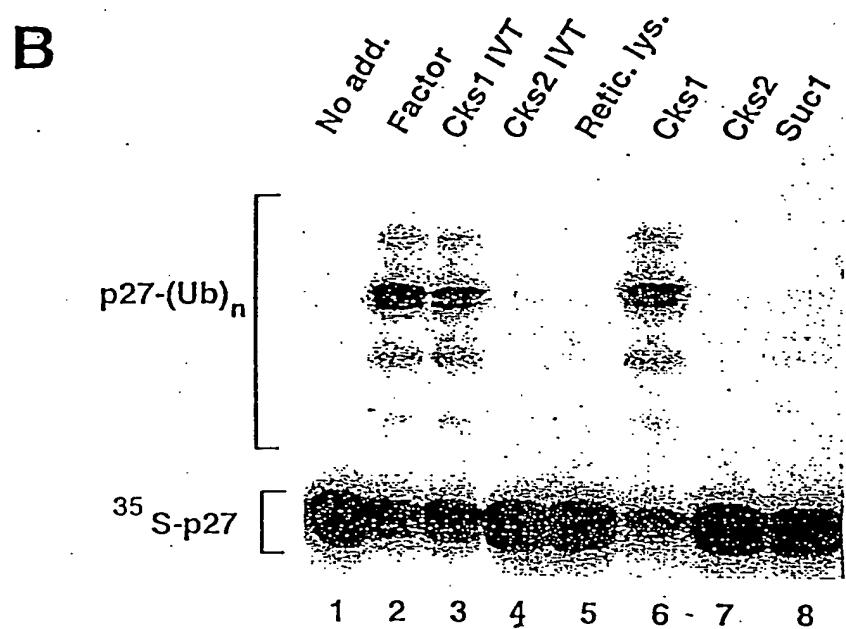


FIG. 48

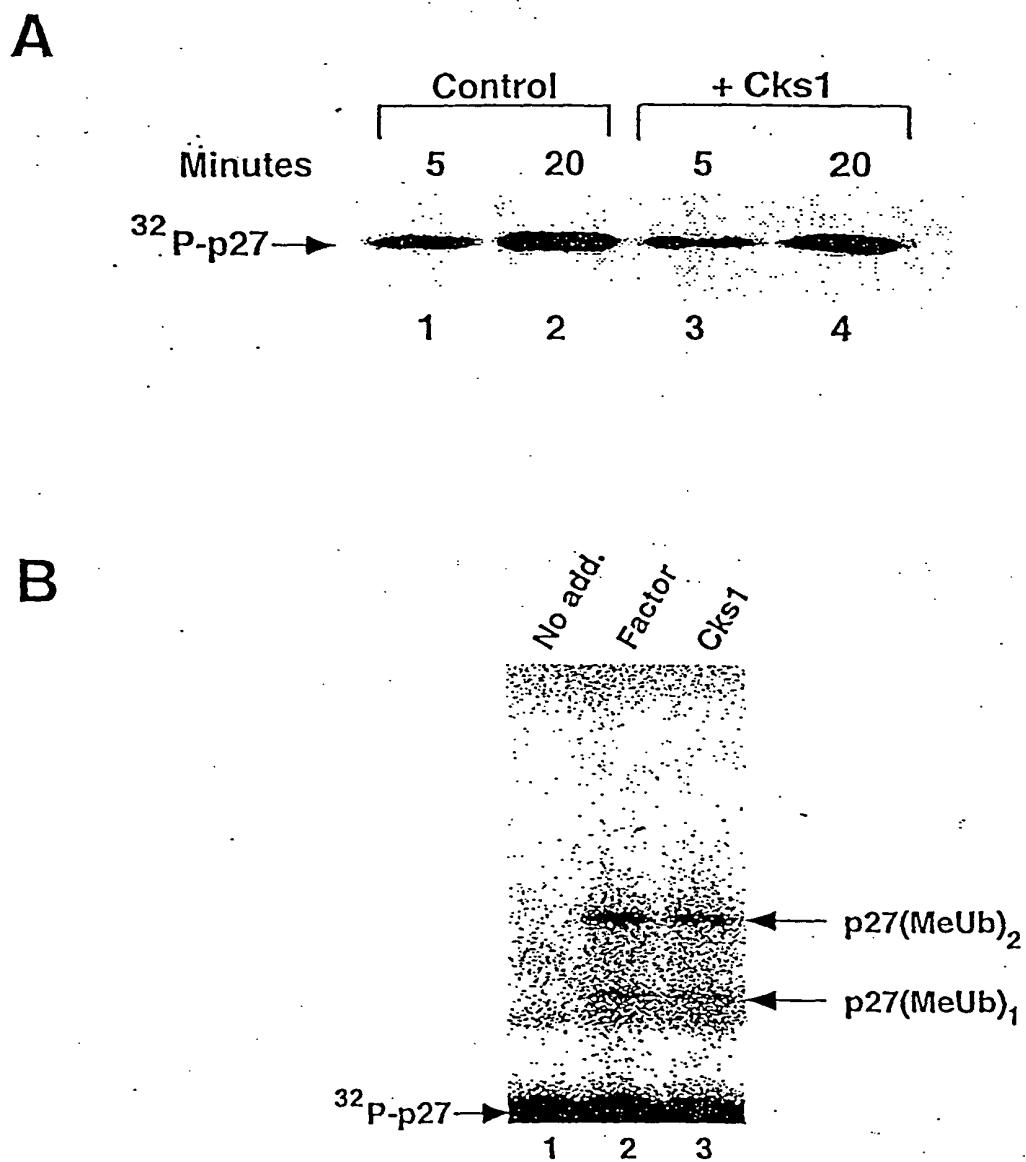
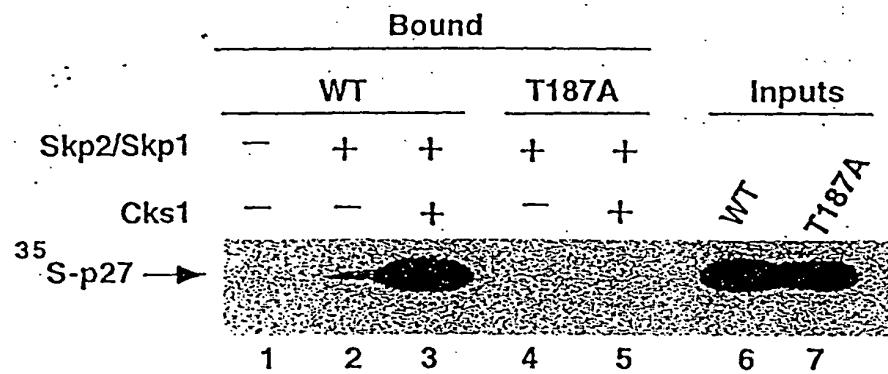
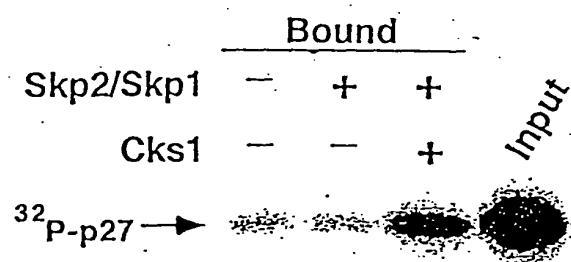
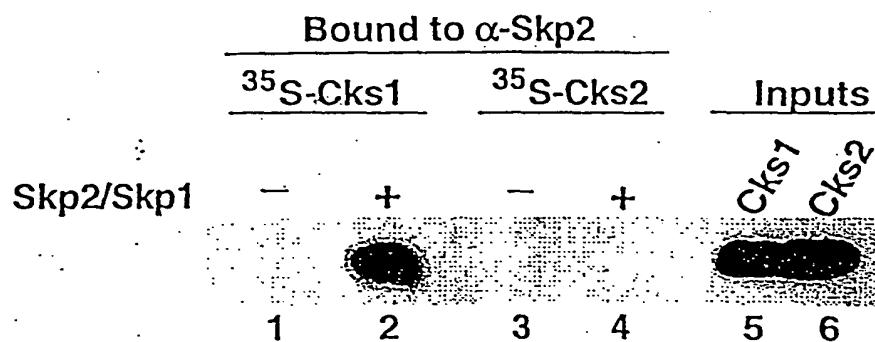
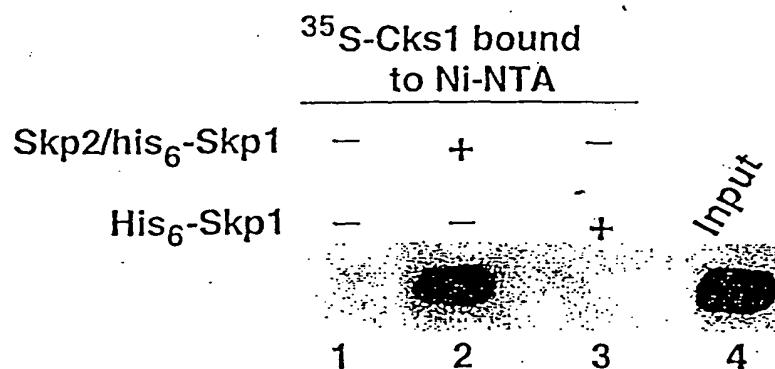
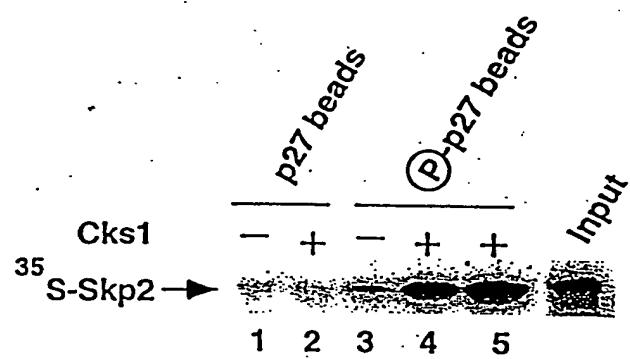
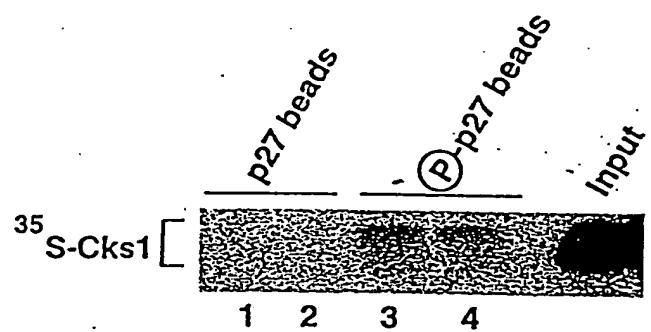


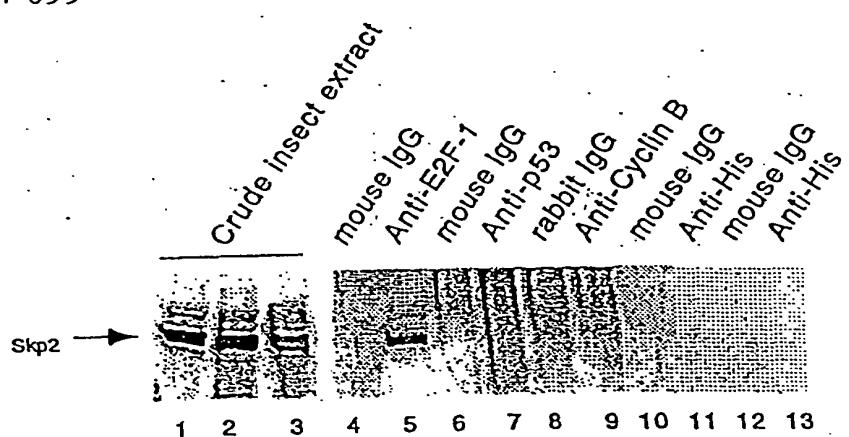
FIG. 49

C**D****FIG. 49**

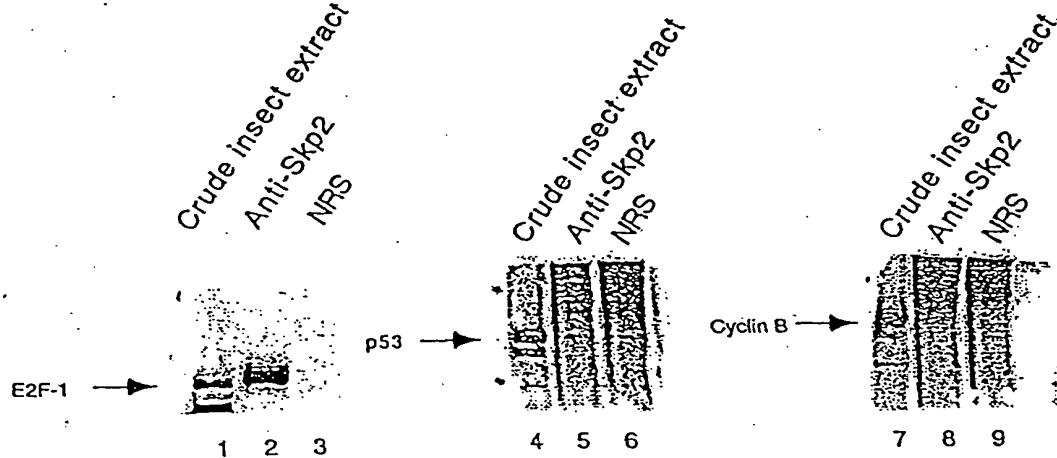
A**B****FIG. 50**

C**D****FIG. 50**

A



B



C

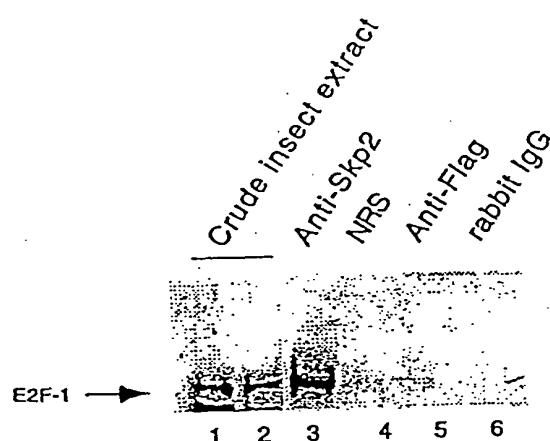


FIG. 51 A-C

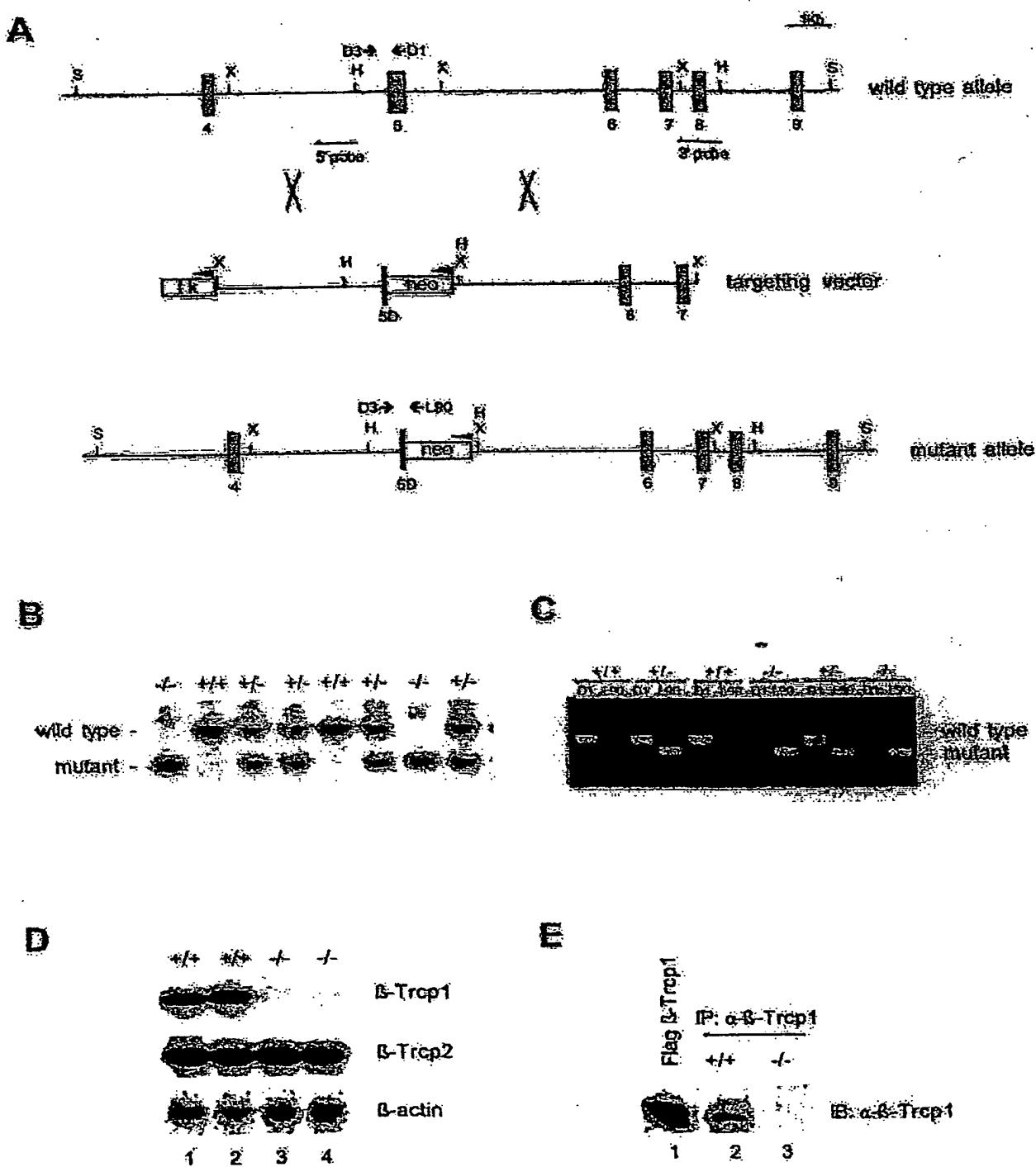
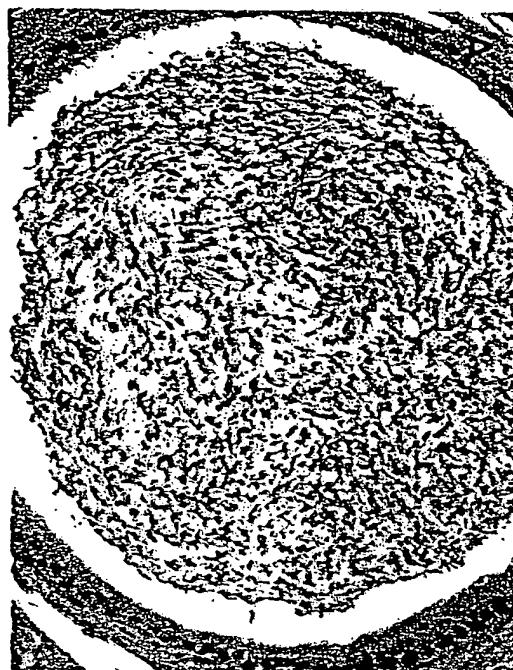
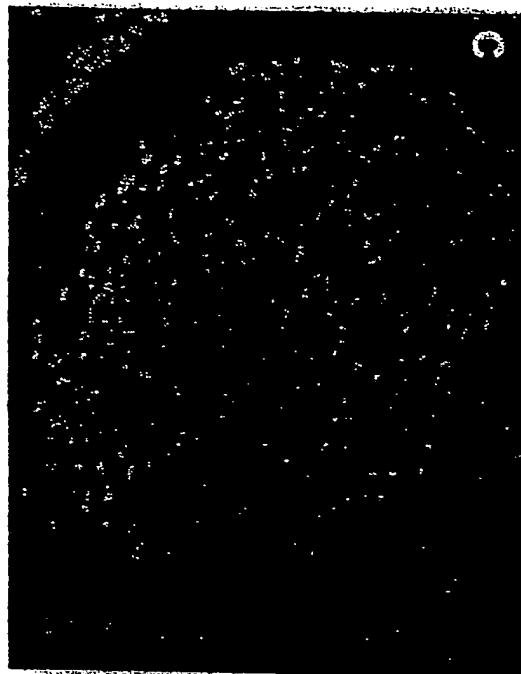
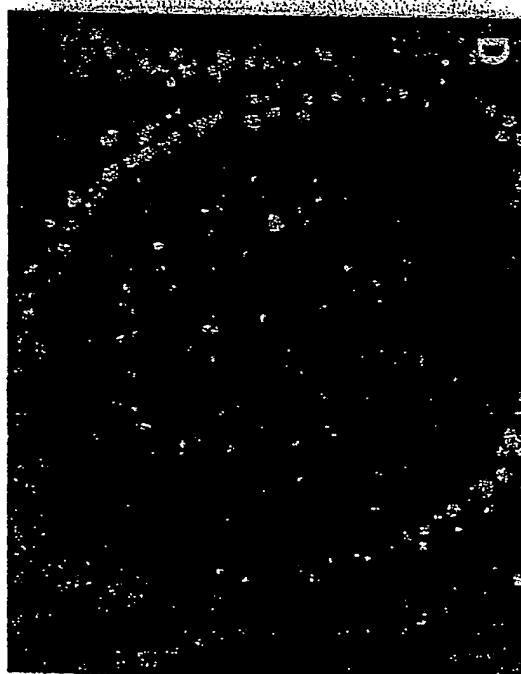


FIG. 52



1/4



1/5

FIG. 53

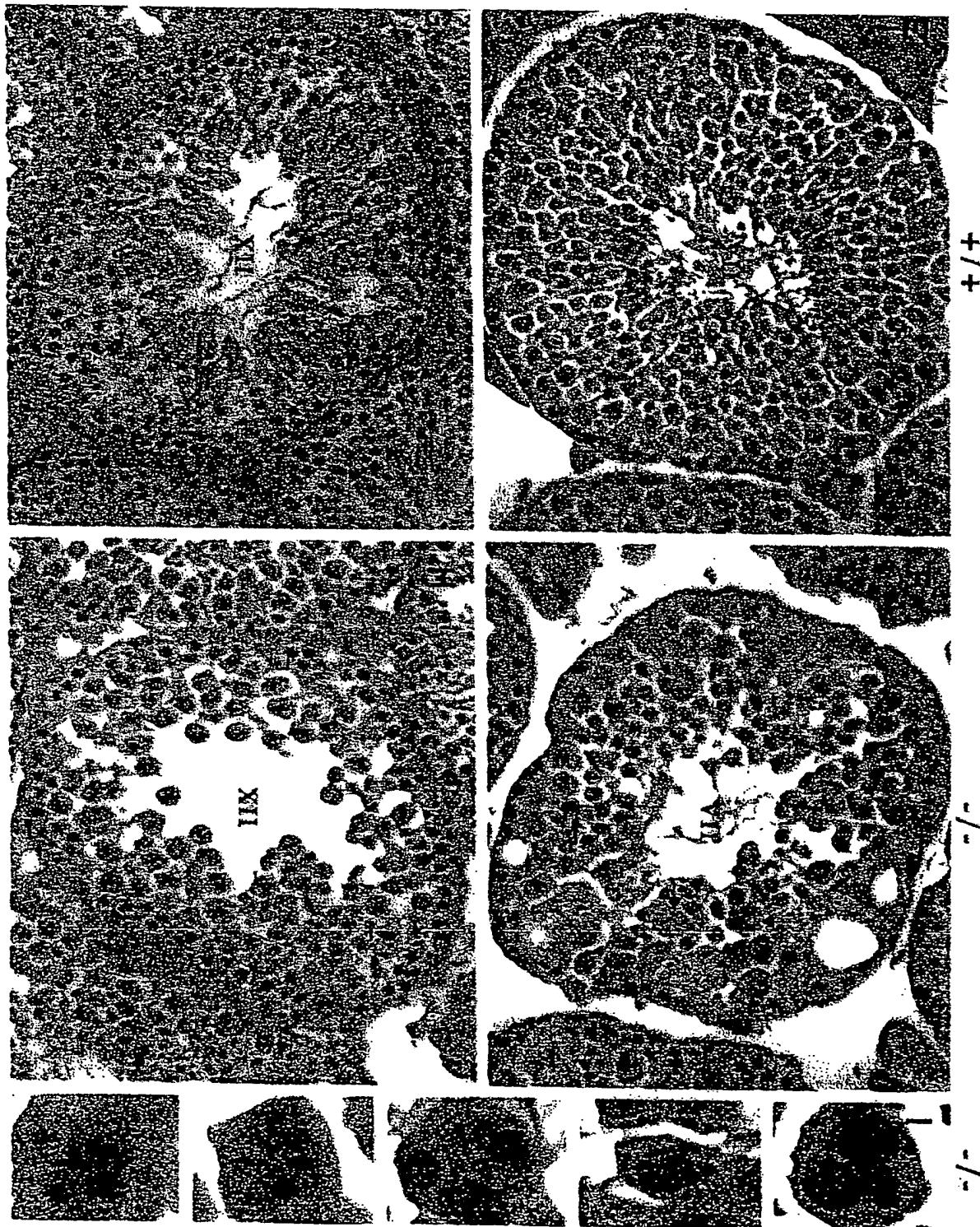
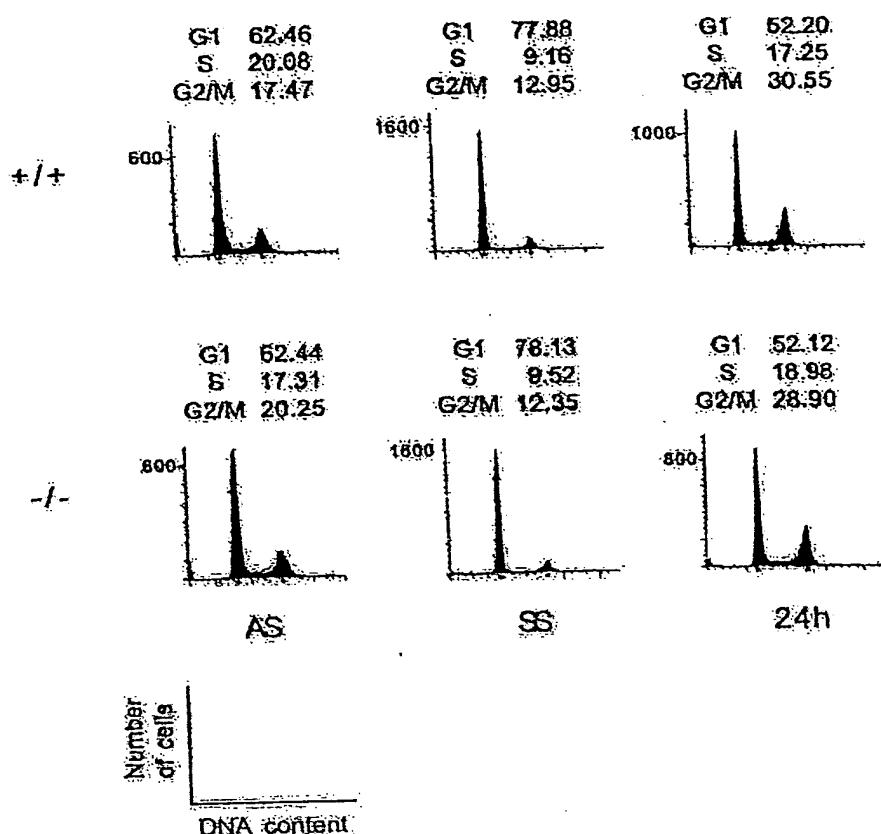
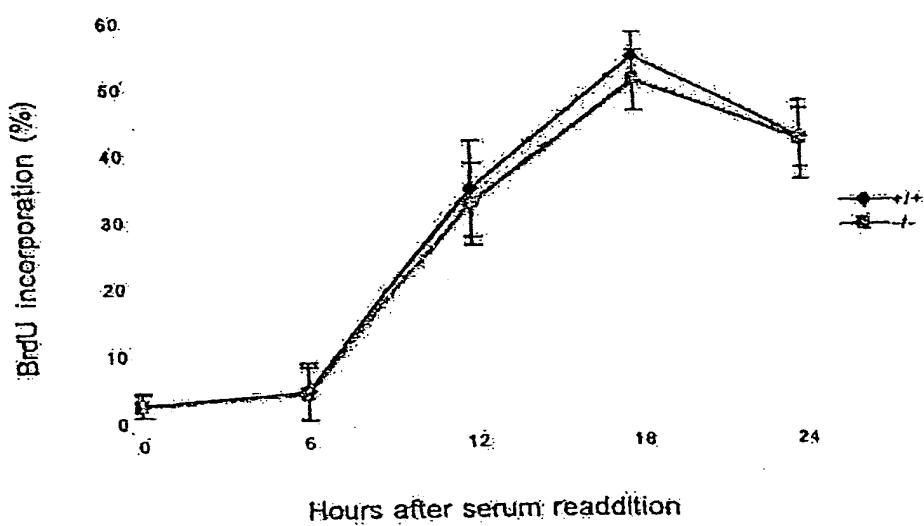
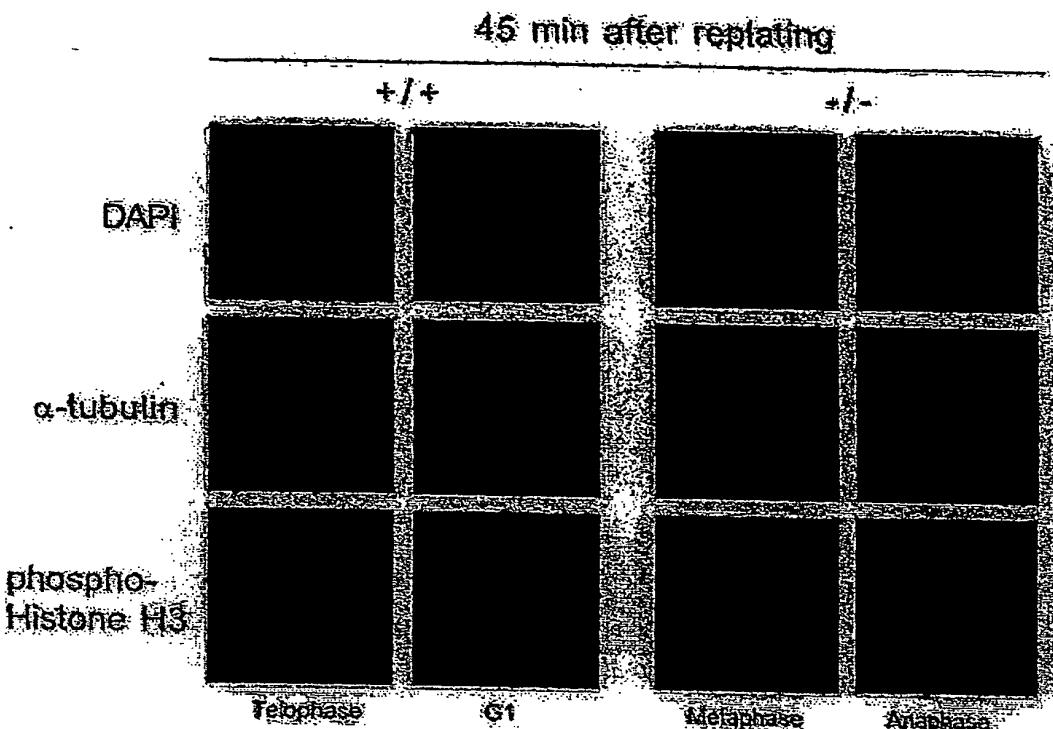


FIG. 53

A**B****FIG. 54**

C



D

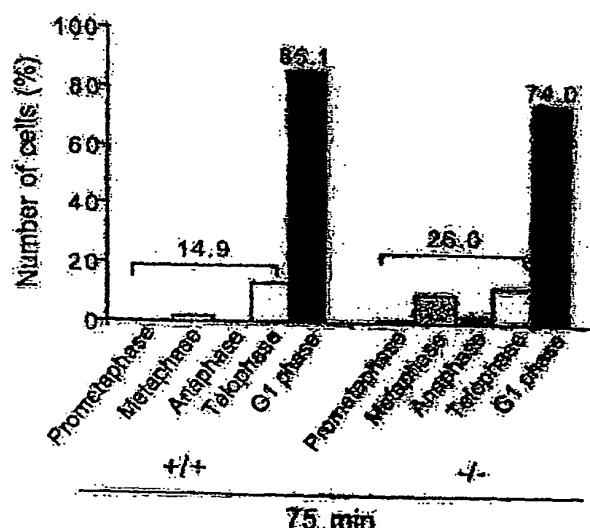
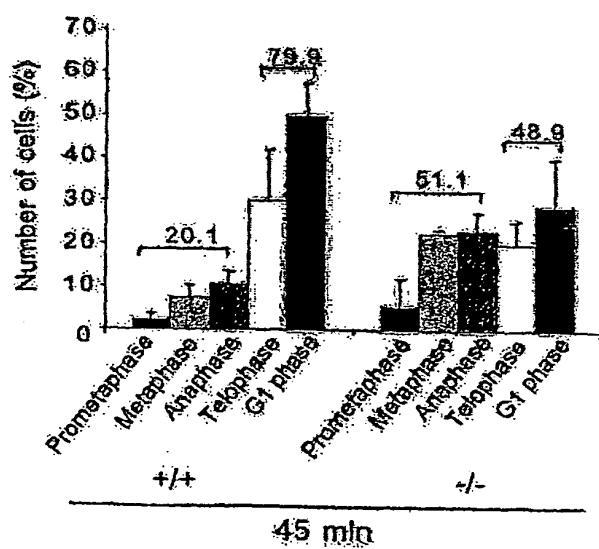
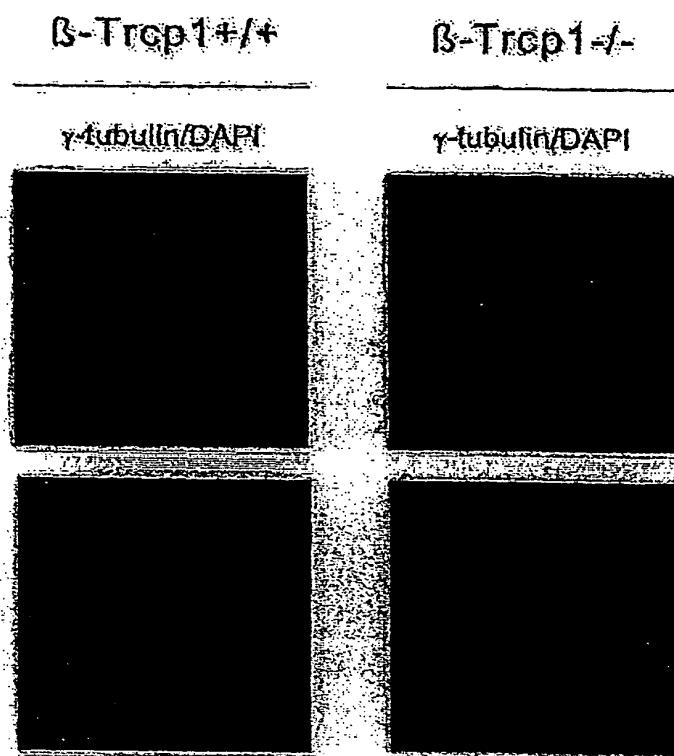


FIG. 54

E



F

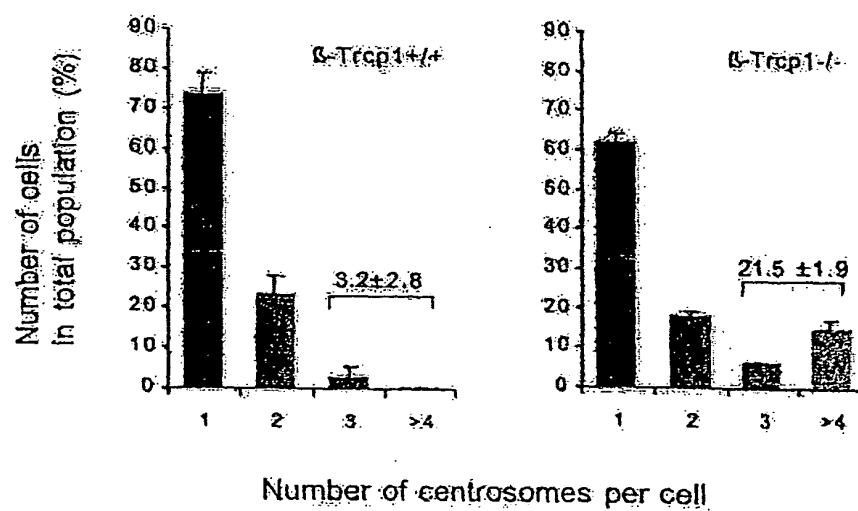
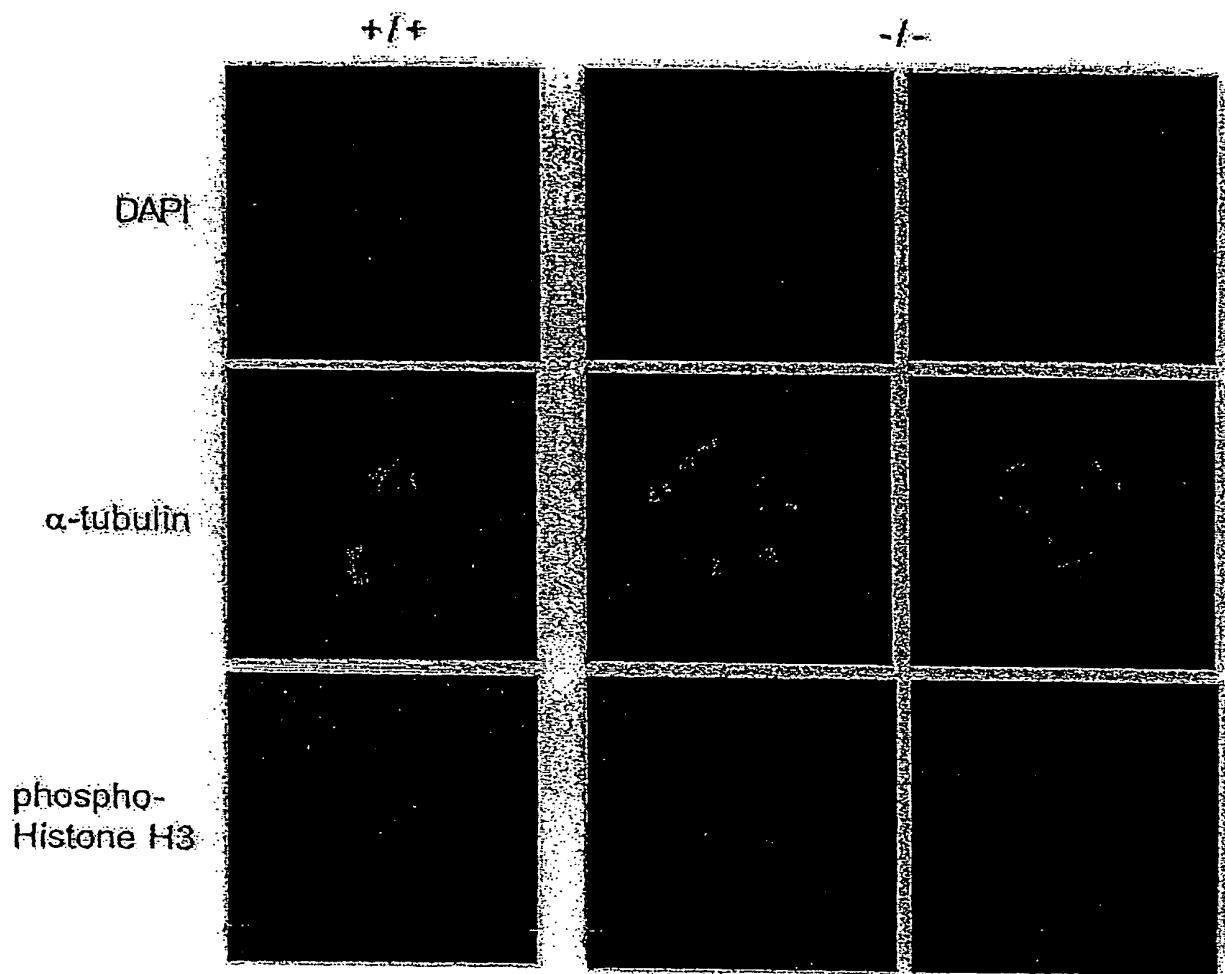
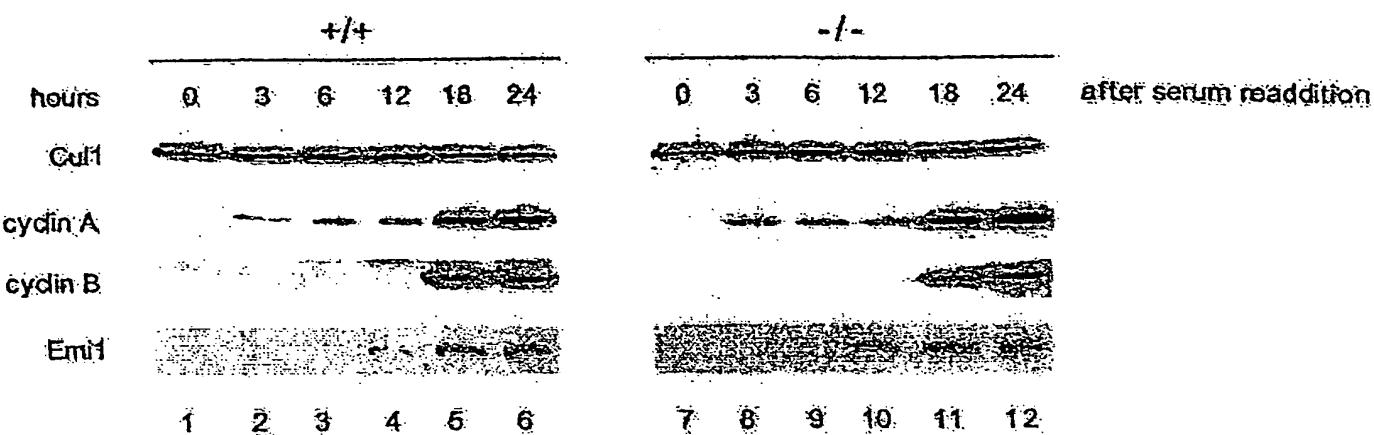
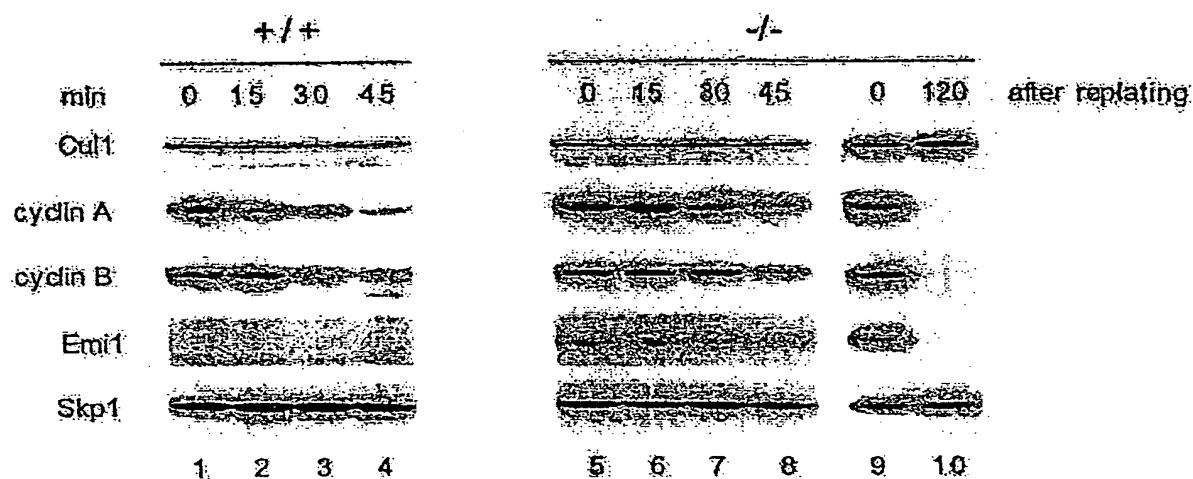
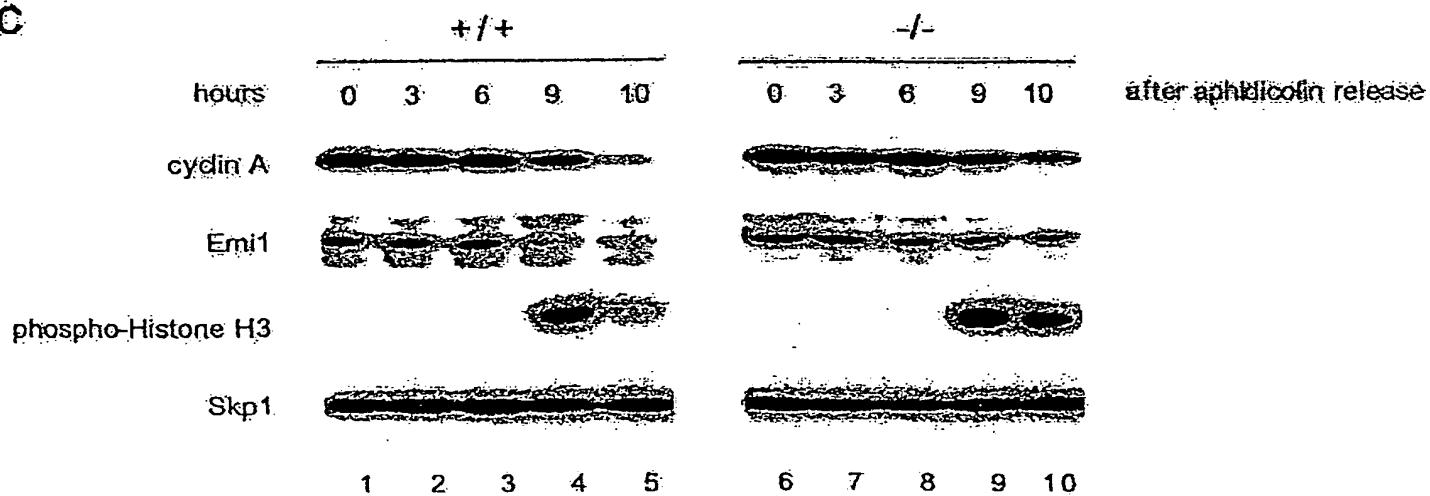
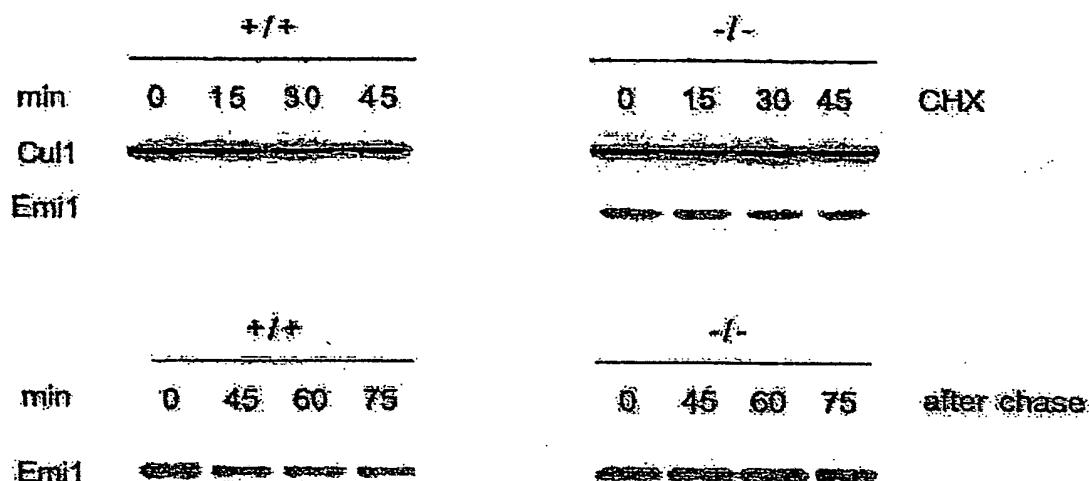


FIG. 54

G**FIG. 54**

A**B****C****FIG. 55**

B



C

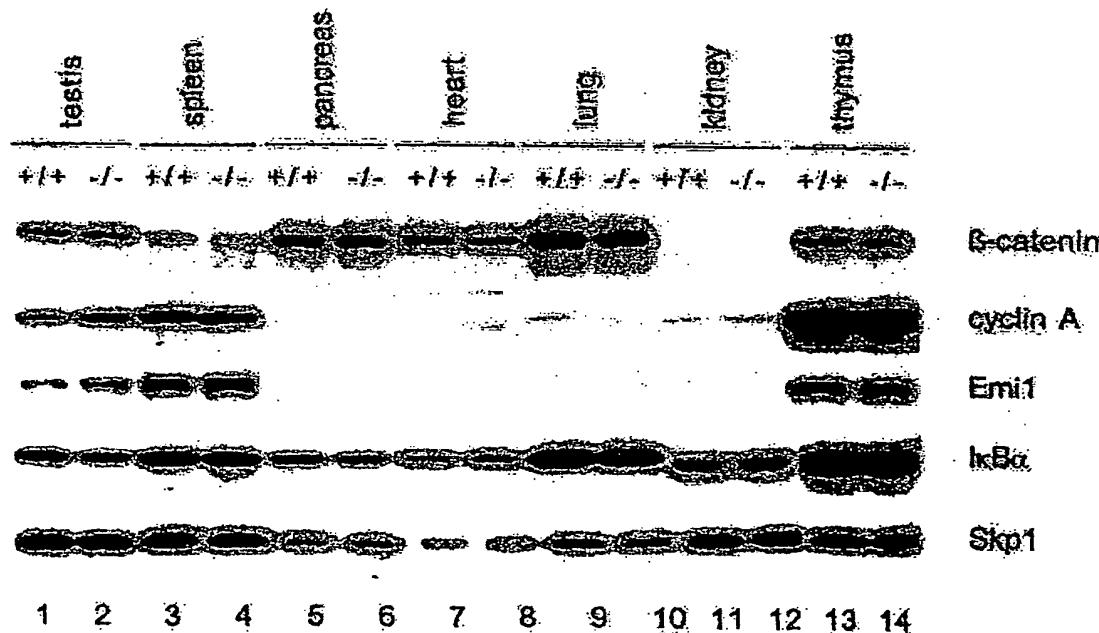
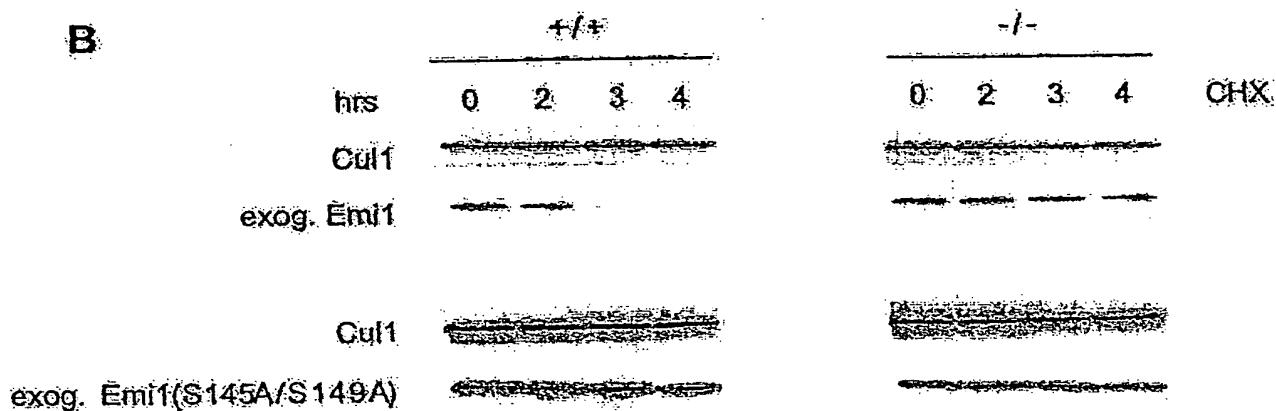
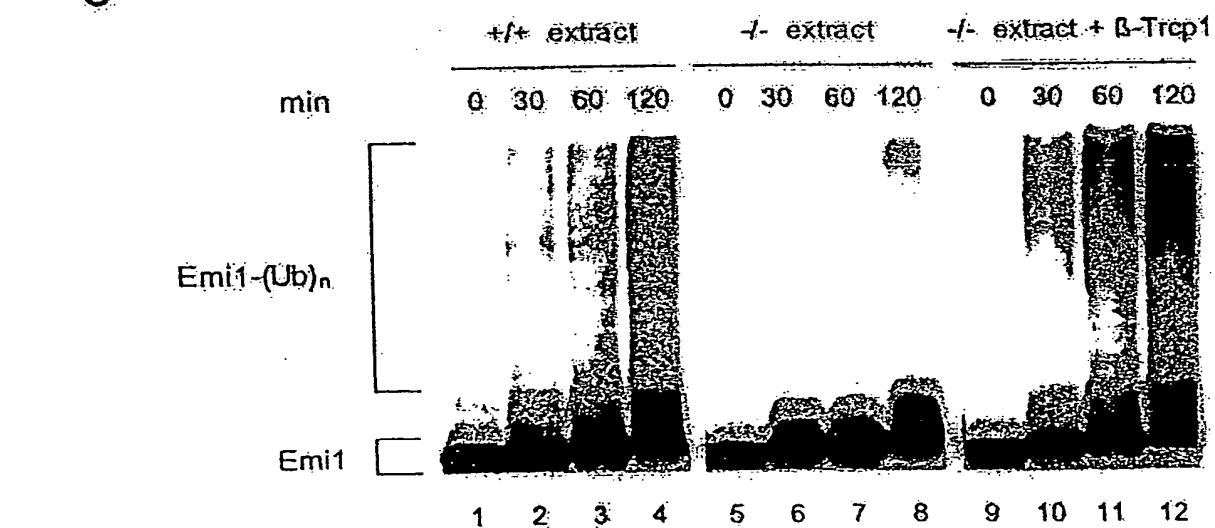


FIG. 55

A

IκBα (Hs)	28	D	R	H		I	D		M	K	D	39
β-catenin (Hs)	29	S	Y	L		I	H		M	A	T	40
Emi1 (Hs)	141	L	Y	G		Y	S		F	S	T	152
Emi1 (Mm)	62	L	Y	E		Y	S		T	Q	Q	93
Emi1 (Xl)	91	A	L	Q		Y	S		L	Q	N	102
Emi1 (Dm)	249	S	L	M		N	S		I	H	L	260

B**C****FIG. 56**

D

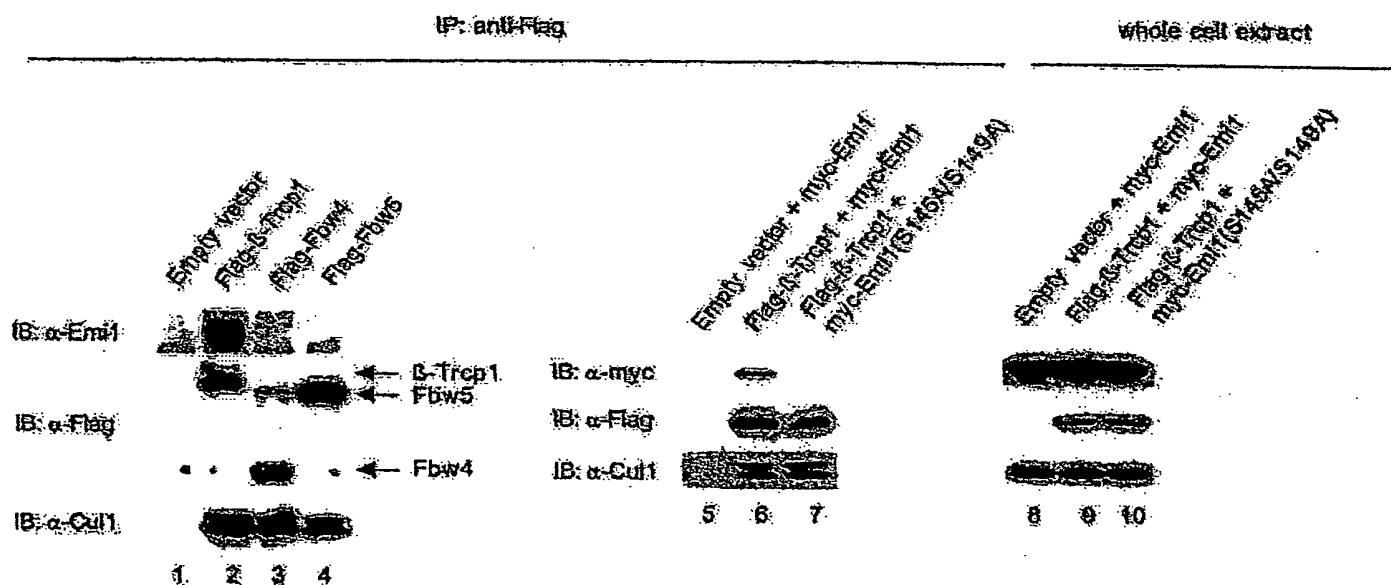


FIG. 56

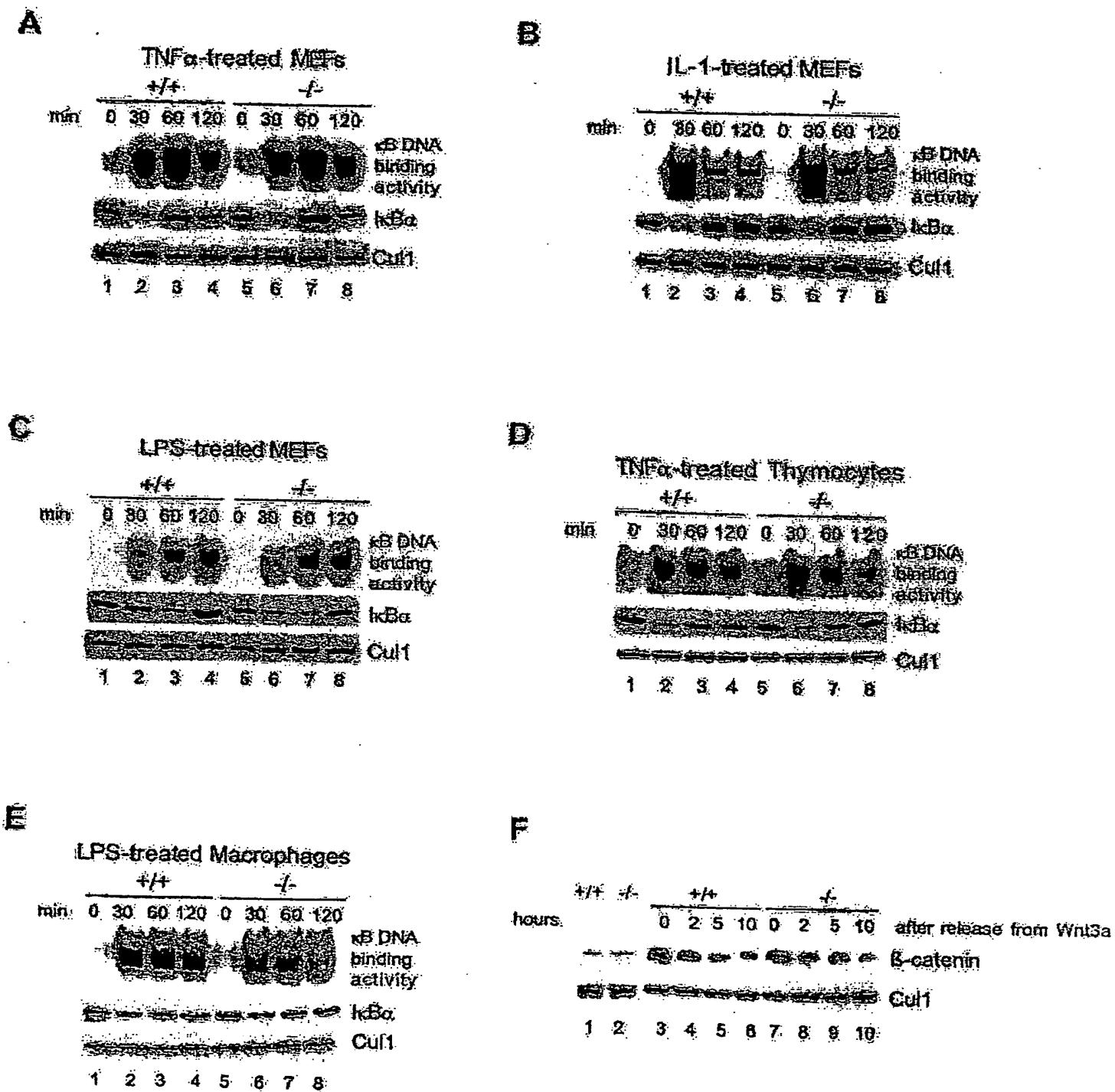


FIG. 57

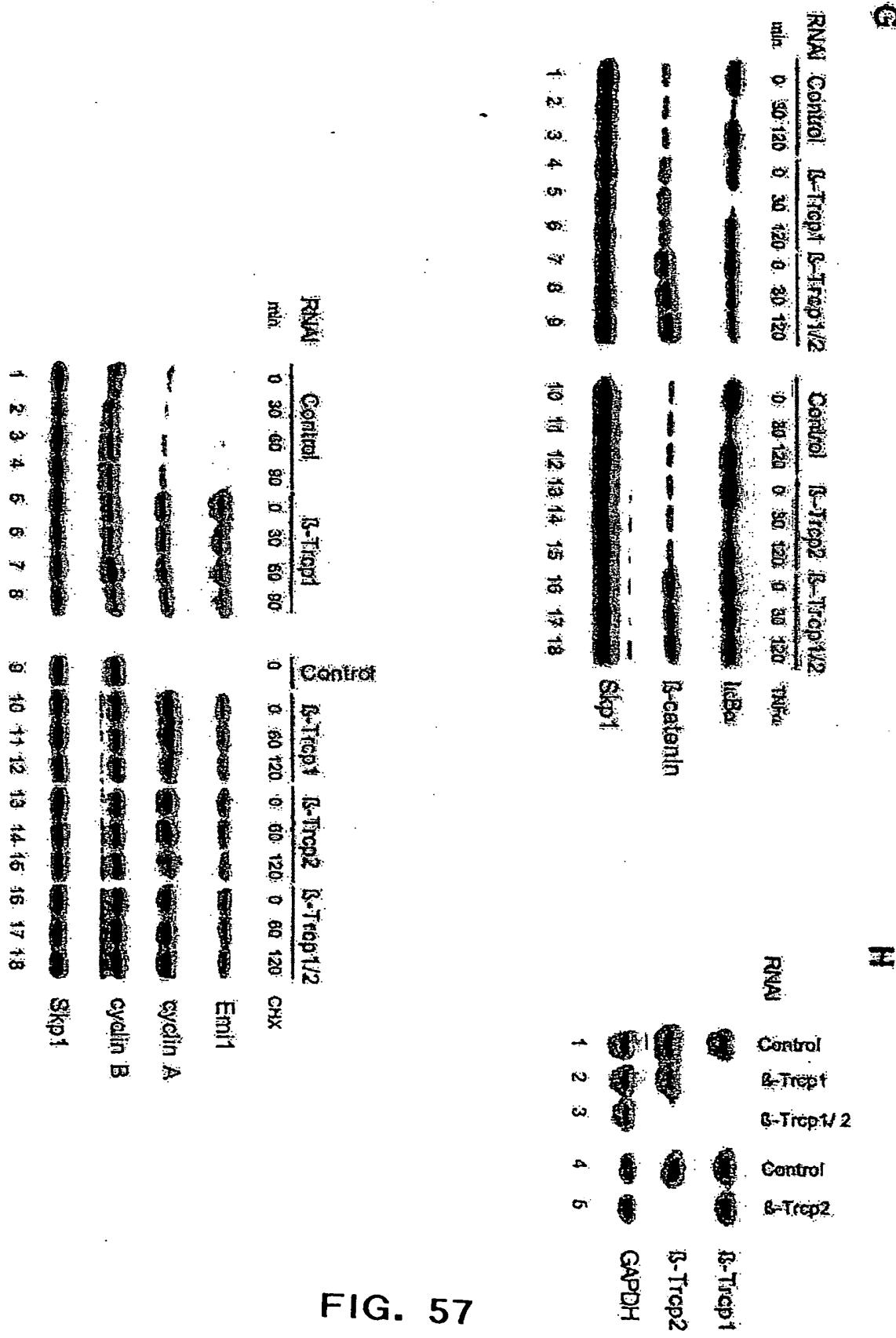


FIG. 57